Evaluation of the TRICARE Program

FY 2000 Report to Congress

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EXECUTIVE SUMMARY

The 104th Congress, through enactment of the National Defense Authorization Act for fiscal year (FY) 1996, Section 717, directed the Secretary of Defense to arrange for an ongoing, independent evaluation of the TRICARE program. The legislation requires that the evaluation assess the effectiveness of the TRICARE program in meeting the following objectives:

- improve the access to and quality of health care received by eligible beneficiaries,
- keep both government and beneficiary costs at levels the same as or lower than before TRICARE was implemented, and
- identify noncatchment areas in which the health maintenance organization (HMO) option of the program (i.e., TRICARE Prime) is available or proposed to become available.

Because the FY 1998 Report to Congress and others have already extensively addressed the issue of extending the Prime option to noncatchment areas, there are no plans to reevaluate it this year.

This year's evaluation covers eight Health Service Regions operating under TRICARE during FY 1998. Only regions with at least one full year under TRICARE by the end of FY 1998 were included in the evaluation. The regions that satisfy this criterion are Regions 3 (Southeast), 4 (Gulf South), 6 (Southwest), 7/8 (Central), 9 (Southern California), 10 (Golden Gate), 11 (Northwest), and 12 (Hawaii). Regions 1 (Northeast), 2 (Mid-Atlantic), and 5 (Heartland) will be covered in next year's evaluation.

Region 11 is being evaluated for the third time; Regions 3, 4, 6, and 9–12 for the second time; and Region 7/8 for the first time. The general evaluation approach is to compare actual access, quality, and costs under TRICARE in FY 1998 with estimates of what those attributes would have been had TRICARE not been implemented. The latter estimates are derived by adjusting observed measures of access, quality, and costs under the traditional military health care benefit in FY 1994 (the last complete fiscal year before TRICARE was implemented) for changes known to have occurred between then and FY 1998. Such changes include but are not limited to inflation, Base Realignment and Closure, force size reductions, and the beneficiary demographic mix (for example, there was a higher concentration of retirees in the FY 1998 population than in the FY 1994 population).

Ideally, it would be desirable to have a control group from which to isolate the effects of TRICARE from extraneous influences on access, quality, and costs. A control group would consist of beneficiaries with characteristics similar to those using TRICARE, but using the traditional military health care benefit instead. Additionally, the health care environment under which they were receiving care would have to be similar in all respects to the current environment, with the exception of TRICARE. For example, they would have to receive care from military hospitals with similar capacities and mix of services as those operating in the evaluation regions before the implementation of

TRICARE. The civilian health care alternatives would have to be similar as well, including the level of private insurance coverage and provider density.

After considering the criteria for forming a control group, the study team determined that no satisfactory control group could be constructed. The natural tendency might be to compare the TRICARE regions with those not yet under TRICARE, but the regions are too dissimilar in more respects than TRICARE. A comparison of trends in the TRICARE regions with trends in the non-TRICARE regions would not likely yield a pure TRICARE effect because it would be confounded with other extraneous influences difficult to control for. The study team therefore concluded that it was best to compare the same regions pre- and post-TRICARE and to adjust the pre-TRICARE results for known changes over time to determine how access, quality, and costs would have progressed in the absence of TRICARE. However, because some changes, such as improvements in medical technology and business practices, cannot easily be measured, it is not possible to completely isolate the effect of TRICARE from changes that might have occurred anyway. When considering the results to follow, the reader should bear in mind that the changes displayed should be interpreted as occurring *under* TRICARE, but not necessarily *because* of TRICARE. Also, because the effects of TRICARE vary by region, the results of this evaluation cannot necessarily be extrapolated to the regions not yet evaluated (Regions 1, 2, and 5).

Access to Care

The evaluation of changes in access and quality of care used data from the 1994, 1996, 1997, and 1998 Health Care Surveys of DoD Beneficiaries. These surveys sampled representative cross sections of all beneficiaries in each respective year. To isolate the effects of the TRICARE program, it was necessary to control for beneficiary population changes that could affect access, such as health status and various demographic characteristics. These effects were controlled using statistical regression analysis.

In the regions studied, access to health care generally improved under TRICARE. Table ES-1 summarizes the changes in access between 1994 and 1998 for all DoD beneficiaries in the regions studied. Enrollees in TRICARE Prime (the HMO option) tended to be satisfied with their level of access. Those enrolled with a military Primary Care Manager[1] (PCM) tended to report greater levels of satisfaction with access than those enrolled with a civilian PCM. Three kinds of access measures were used to reach these conclusions: realized access, availability, and the process of obtaining care.

TRICARE has emphasized well-care and preventive medicine. Table ES-1 shows a general increase in the receipt of preventive care from 1994 to 1998 for the beneficiary population as a whole. Gynecological procedures, including Pap tests, are an exception to this trend.

There has also been a perception of increased availability of care. A greater proportion of the population reported that they were able to get care when they felt they needed it.

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[1] Throughout this report, the term "military PCM" refers to a provider at a military facility, regardless of whether the provider is in the uniformed services or a civilian. Similarly, the term "civilian PCM" refers to a provider at a network facility.

Table ES-1. Summary of Changes in Access (All Evaluated Regions and Sources of Care Combined)

Measure	Before TRICARE (FY 1994)	After TRICARE (FY 1998)
Realized Access		
Use of preventive care		
BP check	0.81	0.91*
Dental care past year	0.60	0.68*
Flu shot past year	0.46	0.54*
Mammogram past year (50+)	0.68	0.71*
PAP test past year	0.69	0.66*
Prostate check past year (age 40+)	0.57	0.60*
Having a medical visit	0.81	0.91*
Use of the emergency room	0.42	0.29*
Availability (Satisfaction with)		
Access to care	0.72	0.80*
Access to hospital care	0.80	0.86*
Access to emergency care	0.79	0.82*
Access to specialists	0.65	0.76*
Access to information by phone	0.59	0.76*
Access to prescription services	0.85	0.88*
Obtaining Care (Satisfaction with)		
Ease of making appointment	0.67	0.88*
Wait time for an appointment	0.68	0.78*
Convenience of hours	0.81	0.87*
Convenience of treatment location	0.83	0.88*
Wait to see provider	0.65	0.74*

Note: Results exclude Regions 1, 2, and 5.

* Indicates statistically significant change ($p < 0.05$).

The greatest increases in perceived access are among those who enrolled in Prime, as shown in Table ES-2. Note, however, that the level of perceived access to care when needed, in general, is considerably higher for those receiving care outside the military system (about 92 percent satisfied, with a 2-percentage-point increase over time). Thus, while TRICARE seems to result in an impression of improved access to care, it still has room for improvement.

Quality of Care

This evaluation considered two major aspects of quality: meeting national standards, and quality of care as perceived by DoD beneficiaries. DoD has adopted as its standard the national health-promotion and disease-prevention objectives specified by the U.S. Department of Health and Human Services in *Healthy People 2000*.[2] Care levels under TRICARE were compared with these national standards. As Table ES-3 shows, most of

[2] Department of Health and Human Services, Office of Disease Prevention and Health Promotion, *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*, 1991.

the goals are being met or are nearly being met under TRICARE. Shortfalls are mainly in the area of use of tobacco products.

Table ES-2. Summary of Changes in Perceived Access to Care for Prime Enrollees (All Evaluated Regions Combined)

Measure	Before TRICARE (FY 1994)	After TRICARE (FY 1998)
Availability (Satisfaction with)		
Access to care	0.63	0.74*
Access to hospital care	0.73	0.81*
Access to emergency care	0.72	0.74*
Access to specialists	0.50	0.66*
Access to information by phone	0.46	0.70*
Access to prescription services	0.80	0.85*
Obtaining Care (Satisfaction with)		
Ease of making appointment	0.53	0.71*
Wait time for an appointment	0.56	0.73*
Convenience of hours	0.72	0.81*
Convenience of treatment location	0.81	0.86*
Wait to see provider	0.53	0.68*

Note: Results include active duty personnel, retirees, and their family members, and exclude Regions 1, 2, and 5.

* Indicates statistically significant change ($p < 0.05$).

Table ES-3. Meeting Quality of Care Goals in FY 1998 (All Sources of Care and All Evaluated Regions Combined)

Measure	DoD Goal	MHS Beneficiaries
Met or Exceeded Goal		
Mammogram past 2 years (age 50+)	0.60	0.87*
Ever had mammogram (age 40-49)	0.80	0.91*
Breast exam past year (age 40+)	0.60	0.69*
Cholesterol test past 5 years	0.75	0.81*
PAP smear past 3 years	0.85	0.89*
Ever had PAP test	0.95	0.99*
Know results of BP check	0.90	0.92*
First trimester care	0.90	0.92
Did not chew tobacco past year (all ages)	0.96	0.95
Shortfalls		
Did not chew tobacco past year (age 18-24)	0.96	0.86*
Did not smoke (age 18-24)	0.80	0.76*
Dental care past year	0.70	0.67*
Pregnant non-smoker	0.90	0.88*
Physical exam (AD only)	0.95	0.59*

* Indicates statistically significant difference between goal and level of beneficiary care ($p < 0.05$).

Also examined were beneficiaries' perceptions of the quality of their health care under TRICARE. As shown in Table ES-4, the general pattern of results suggests that most

beneficiaries were satisfied with the quality of their care. The changes in perceived quality between 1994 and 1998 were statistically significant and in the positive direction.

Table ES-4. Measures of Perceived Quality of Care—All Evaluated Regions Combined (Proportion of Population Satisfied with Quality Attribute)

Satisfaction Measure	FY 1994	FY 1998
Ability to diagnose	0.78	0.85
Administrative staff courtesy	0.79	0.93
Attention by provider	0.79	0.89
Explanation of medical tests	0.80	0.86
Explanation of procedures	0.81	0.87
Health care resources	0.56	0.70
Health care technical aspects	0.71	0.79
Outcome of health care	0.81	0.87
Overall quality of care	0.81	0.88
Skill of provider	0.83	0.89
Thoroughness of exam	0.79	0.87
Thoroughness of treatment	0.81	0.87
Time spent with provider	0.75	0.85

Note: All differences between 1994 and 1998 perceived satisfaction levels were statistically significant ($p < .05$).

Satisfaction with Filing Medical Claims

Fewer people have had to file claims under TRICARE (44 percent in FY 1994, and 33 percent in FY 1998). The rate of claim filing for MHS beneficiaries was higher than that observed under plans serving the general population (29 percent in FY 1998). At the same time, MHS beneficiaries tend to experience more problems per claim filed than the general population (53 versus 40 percent). Having a problem with a claim is a major cause of dissatisfaction with one's health plan. Those who experienced problems with claims processing were 25 percent more likely to rate their health plan lower than those who did not have problems with claims.

Effects of Region Maturity

As TRICARE has matured, satisfaction with access and quality of care has increased, particularly among Prime enrollees, as shown in Table ES-5.

Table ES-5. Percentage of Prime Enrollees Satisfied with Indicator

	Region Maturity (Years Into TRICARE)			
Indicator	Pre-TRICARE	+1	+2	+3
Access to care when needed	59	71	73	78
Overall quality of care	68	77	80	85

Note: Prime enrollees include active duty members, retirees, and family members.

Cost to the Government

Absent a control group, the study team constructed an FY 1994 baseline by adjusting actual FY 1994 costs for inflation, rightsizing Military Treatment Facilities (MTFs), and changing the size and composition of the beneficiary population. The FY 1994 baseline represents an estimate of what government costs would have been in FY 1998 had the traditional military health care benefit been continued. Estimated FY 1994 baseline costs were then compared with actual FY 1998 costs under TRICARE. Table ES-6 summarizes the findings with regard to government costs for the TRICARE regions covered by this evaluation.

Table ES-6. Effect of TRICARE on Government Costs (Millions of FY 1998 Dollars)

Source	FY 1994 Baseline	FY 1998 TRICARE	Difference
Direct Care	$5,931	$5,504	–$427
Managed Care Support	2,132	2,213	81
Other Government Costs	579	607	28
Total Government Cost	$8,641	$8,323	–$318

Note: Excludes Regions 1, 2, 5, Alaska, and overseas.

An effort was made to provide as complete an accounting of MHS costs as possible. However, it is not possible to develop a complete reconciliation between DoD information systems and the Defense Health Program (DHP), partly because DHP obligations translate into outlays over a multi-year time frame. In addition, there is no standard crosswalk between DoD information systems and any particular subset of program elements that make up the DHP. Consequently, the costs identified do not align completely with the FY 1998 DHP, which was $15.8 billion. The total worldwide costs identified from DoD information systems were only $14.1 billion.

Direct care costs include the cost of providing health care services at MTFs as well as administrative and overhead costs. All health care services were considered, whether or not they were affected by TRICARE (e.g., dental care costs were included). TRICARE had its biggest impact on inpatient costs, which declined by 32 percent under TRICARE. Not only did the hospitalization rate go down, but the average length of stay declined as well. On the other hand, outpatient utilization and costs increased under TRICARE. Under managed care, inpatient utilization tends to decline because Peer Review Organizations must determine that an admission is medically necessary, and outpatient utilization tends to increase because access has improved (especially for enrolled retirees). That pattern is consistent with the successful application of utilization management and corresponds with what typically occurs in commercial managed-care settings. On balance, direct care costs under TRICARE were $427 million lower than those in the FY 1994 baseline.

Civilian-sector care under TRICARE is arranged by Managed Care Support (MCS) contractors, who supplement the care provided at MTFs. FY 1998 MCS costs under TRICARE were $81 million higher than CHAMPUS costs in the FY 1994 baseline.

Although both inpatient and outpatient costs were lower, they were more than offset by high contractor administrative costs. Administrative costs comprised an average of 17 percent of total MCS contract value throughout the TRICARE regions.

The one health service for which utilization and costs have continued to increase under TRICARE is prescriptions. Prescription costs increased by over $200 million throughout the TRICARE regions. These increases included prescriptions filled at MTF pharmacies in connection with MTF visits (up $81 million), prescriptions written by civilian physicians but filled at MTF pharmacies (up $66 million), and prescriptions filled at MCS network pharmacies (up $52 million). In addition, the new National Mail Order Pharmacy benefit increased costs by another $13 million. The pattern of escalating prescription costs is not unique to TRICARE, however. Prescription costs have been spiraling ever higher in the civilian sector as well.

Despite the increases in prescription costs and the administrative costs on the MCS contracts, total government costs under TRICARE were $318 million lower than those in the FY 1994 baseline. It is too early to say, however, whether there is a trend towards reduced costs under TRICARE. The cost reduction in FY 1998 was 4.4 percent of costs that could reasonably have been affected by TRICARE (e.g., excluding dental care), whereas it was 5.5 percent in FY 1997.

Although the government realized a decrease in its costs under TRICARE, approximately half of the decrease appears to be attributable to reduced utilization of the Military Health System by nonenrolled beneficiaries. Direct-care inpatient utilization by nonenrollees declined by 26 percent, and purchased-care inpatient and outpatient utilization each declined by about 5 percent. According to the 1998 Health Care Survey of DoD Beneficiaries, 14 percent of nonenrollees added private insurance coverage because of TRICARE. Furthermore, under TRICARE there has been a decline in the incidence of purchased-care claims filing by nonenrollees with private health insurance.

Cost to Covered Beneficiaries

To evaluate costs to both TRICARE-eligible and Medicare-eligible beneficiaries, the beneficiary family was used as the unit of analysis. This is because insurance decisions are made on a family basis, and because deductibles are capped for families. TRICARE can affect beneficiaries' out-of-pocket costs by

- eliminating deductibles and lowering copayments for Prime enrollees,
- increasing the utilization of health care services by Prime enrollees as a result of lower per-visit costs,
- forcing nonenrollees to seek more costly care under TRICARE Standard or from the private-sector by reducing space-available care at MTFs,
- inducing enrollees to drop and nonenrollees to add supplemental or other private health insurance coverage, and
- assessing an enrollment fee on retirees and their family members.

Consequently, out-of-pocket costs for TRICARE-eligibles include deductibles and copayments for purchased care, TRICARE Prime enrollment fees, and premiums for supplemental and other private health insurance. Note that non-active-duty members with

a military PCM still incur copayments under TRICARE when they are referred to the civilian network for care. For Medicare-eligibles, who are ineligible to enroll in Prime or to use purchased care, costs affected by TRICARE include Medicare deductibles and copayments and insurance expenses.

Figure ES-1 shows the effect of TRICARE on beneficiaries' out-of-pocket expenses by sponsor type and enrollment status. For active-duty families, annual expenses declined slightly for those with a military PCM and increased somewhat for those with a civilian PCM. For active-duty families with a civilian PCM, expenses increased because they used substantially more health care services. For active-duty families who did not enroll in Prime, out-of-pocket expenses increased by $87. The increase in expenses for active-duty families was due primarily to higher insurance costs.

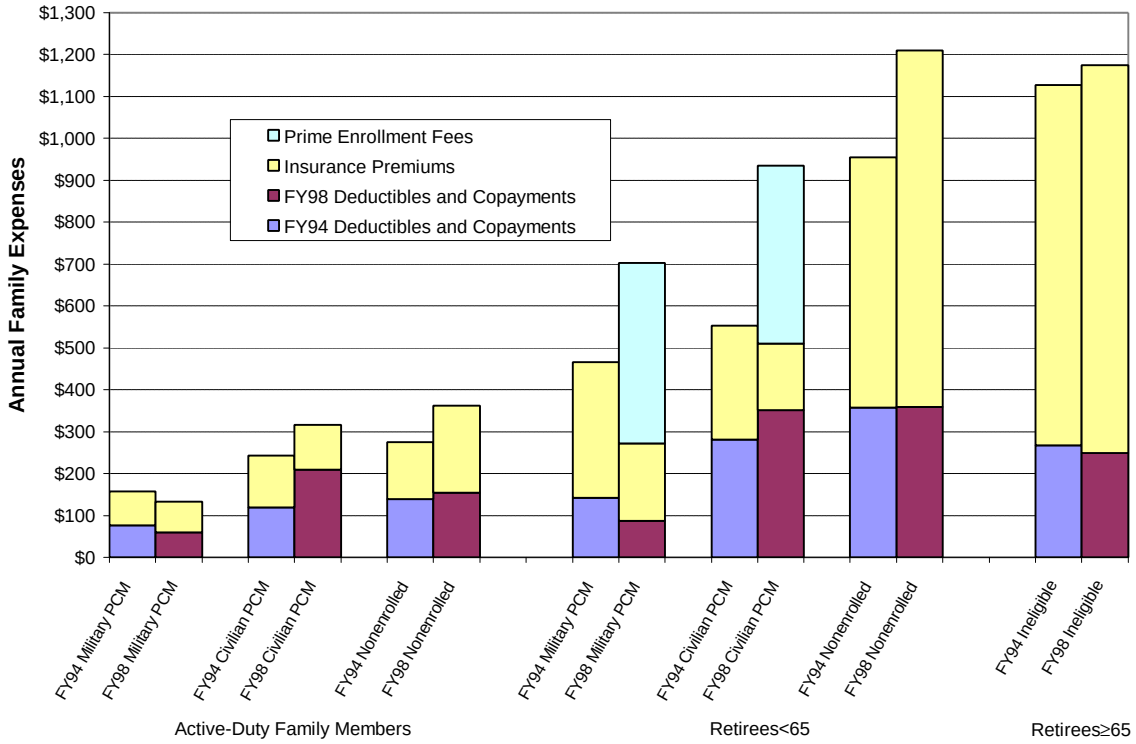

Figure ES-1. Effect of TRICARE on Family Out-of-Pocket Expenses

For retiree families enrolled with a military PCM, out-of-pocket costs increased $236 under TRICARE. Higher enrollment fees more than offset the decline in deductibles, copayments, and insurance expenses for those families. Even without the enrollment fee, costs under TRICARE were only slightly lower for retiree families enrolled with a civilian PCM. The reason for this seemingly anomalous result is that families with a civilian PCM have much higher utilization under TRICARE, thereby increasing their expenses. With the addition of the enrollment fee, out-of-pocket costs for families with a civilian PCM increased by $381. Out-of-pocket expenses increased by $254 for nonenrolled retiree families because of a $252 increase in insurance expenses.

Medicare-eligible families experienced an increase of $55 in their out-of-pocket costs under TRICARE. The reason this group of beneficiaries was relatively unaffected (in terms of out-of-pocket costs) by TRICARE is that most of them were heavily insured even before TRICARE. Over 80 percent had some form of insurance coverage, including Medigap policies, Medicare Risk HMOs, and current or former employer-provided insurance. The Medicare-eligibles who are most likely to be affected by TRICARE are those with only basic Medicare coverage. From the 1998 Health Care Survey of DoD Beneficiaries, the latter group also has the lowest family incomes.

Overall Conclusion

During FY 1998, both the access to and quality of health care for DoD beneficiaries improved under TRICARE. Government costs under TRICARE were lower than the estimated costs had the traditional health care benefit been extended through FY 1998. Beneficiary out-of-pocket costs were lower for most active-duty families, but were higher for TRICARE-eligible retiree families. Out-of-pocket costs for Medicare-eligible families were only marginally higher under TRICARE because most of these families continue to carry supplemental forms of private insurance. In addition, the availability of Medicare Risk HMOs in some regions provides a low-cost alternative to TRICARE.

1. INTRODUCTION

The 104th Congress, through enactment of the National Defense Authorization Act for fiscal year (FY) 1996, Section 717, directed the Secretary of Defense to arrange for an ongoing, independent evaluation of the TRICARE program. The legislation requires that the evaluation assess the effectiveness of the TRICARE program in meeting the following objectives:

- improve the access to and quality of health care received by eligible beneficiaries,
- keep both government and beneficiary costs at levels the same as or lower than before TRICARE was implemented, and
- identify noncatchment areas in which the health maintenance organization (HMO) option of the program (i.e., TRICARE Prime) is available or proposed to become available.

Because the FY 1998 Report to Congress and others have already extensively addressed the issue of extending the Prime option to noncatchment areas,[1] there are no plans to reevaluate it this year.

The legislation further states that the Secretary may use a Federally Funded Research and Development Center to conduct the evaluation. The Office of the Assistant Secretary of Defense for Health Affairs [OASD(HA)] selected the CNA Corporation and the Institute for Defense Analyses (IDA) to conduct the evaluation.

This year's report extends the evaluation of the TRICARE program to eight Health Service Regions—3 (Southeast), 4 (Gulf South), 6 (Southwest), 7/8 (TRICARE Central), 9 (Southern California), 10 (Golden Gate), 11 (Northwest), and 12 (Hawaii). A common framework is developed for the analysis of access and quality of care and the analysis of utilization and cost. Access, quality, and costs under TRICARE in FY 1998 are compared with estimates of those attributes under the traditional military benefit of direct care and the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) that prevailed in FY 1994. The latter estimates are adjusted for known changes in the military beneficiary population composition and size. The FY 1994 cost estimates are also adjusted for inflation, changes in Military Treatment Facility (MTF) accounting, and Base Realignment and Closure (BRAC) and other Service "rightsizing" initiatives.

Regions 7 and 8 (consolidated into TRICARE Central) experienced their first full year under TRICARE in FY 1998 and are evaluated for the first time in this report. Region 11 is evaluated in its third full year under TRICARE whereas the other regions covered by this evaluation (other than TRICARE Central) are evaluated in their second year. The remaining regions [1 (Northeast), 2 (Mid-Atlantic), and 5 (Heartland)] will be covered in the FY 2001 report.

[1] A catchment area is an approximately 40-mile-radius region around a military hospital, allowing for natural geographic boundaries and transportation accessibility. Noncatchment areas lie outside catchment area boundaries.

As with the previous evaluations, there is no control group from which direct inferences can be made on how access, quality, utilization, and cost would have progressed in the absence of TRICARE. For this evaluation, a control group would consist of regions with similar MTF services and capacities, serving similar beneficiary populations in terms of size, composition, health, and private insurance coverage. Furthermore, the control regions would have to conduct business in a manner uninfluenced by TRICARE. Because it is believed that no such control regions exist, all comparisons under TRICARE are made with the traditional approach to military health care delivery adjusted, where possible, for known changes that would likely have occurred even in the absence of TRICARE. Thus, if TRICARE is found to be effective in terms of its stated objectives, this does not mean that it is more effective than alternative managed care models—only that it is more effective than the way the military used to deliver health care.

Because most of the expected cost savings and improvements in access and quality are purportedly due to features of the Prime option, estimates of cost, access, and quality are broken out, whenever possible, by beneficiaries' enrollment status [i.e., enrolled with a military Primary Care Manager (PCM), enrolled with a civilian PCM, or not enrolled].

Whenever possible, an attempt is made to discern the reasons for any differences between the traditional and TRICARE systems. For example, the efficacy of the Prime option could be affected by favorable selection in the early stages of the TRICARE program. That is, beneficiaries who select the Prime option may be younger or healthier than the general Department of Defense (DoD) beneficiary population and, consequently, use fewer medical services (affecting cost) and have better treatment outcomes (affecting quality). Conversely, improved benefits under TRICARE may have attracted "ghost" beneficiaries back into the system, thereby increasing total costs. These and other effects will be investigated in an effort to understand the cost differences between the traditional system and TRICARE.

This report begins with some background information about the TRICARE program. That section is followed by the findings regarding the impact of TRICARE on beneficiary access to health care and on the quality of health care. Then come the findings regarding government and beneficiary costs, respectively. The main text presents the evaluation results for all TRICARE regions combined; the appendices present additional details by region.

2. BACKGROUND

TRICARE is the DoD's regional managed-care program for delivering health care to members of the Armed Services and their families, survivors, and retired members and their families. Congress has mandated that the program be modeled on HMO plans offered in the private sector and other similar government health-insurance programs. In addition, those who enroll in the HMO option are to have reduced out-of-pocket costs and a uniform benefit structure. Congress further directed that the TRICARE program be administered so that the costs incurred by the DoD are no greater than the costs that would otherwise have been incurred under the traditional benefit of direct care and CHAMPUS.

The program offers three choices to CHAMPUS-eligible beneficiaries. They can:

- receive care from civilian providers under "TRICARE Standard" (same as standard CHAMPUS),
- use a network of civilian preferred providers on a case-by-case basis under "TRICARE Extra," or
- enroll in an HMO-like program called "TRICARE Prime."

TRICARE is administered on a regional basis. The country is divided into 11 geographical regions, as shown in Figure 2-1, and a Military Treatment Facility (MTF) commander in each region is designated as Lead Agent. The Lead Agents are responsible for coordinating care within their regions. They ensure the appropriate referral of patients between the direct-care system and civilian providers and have oversight responsibility for delivering care to both active-duty and non-active-duty beneficiaries.

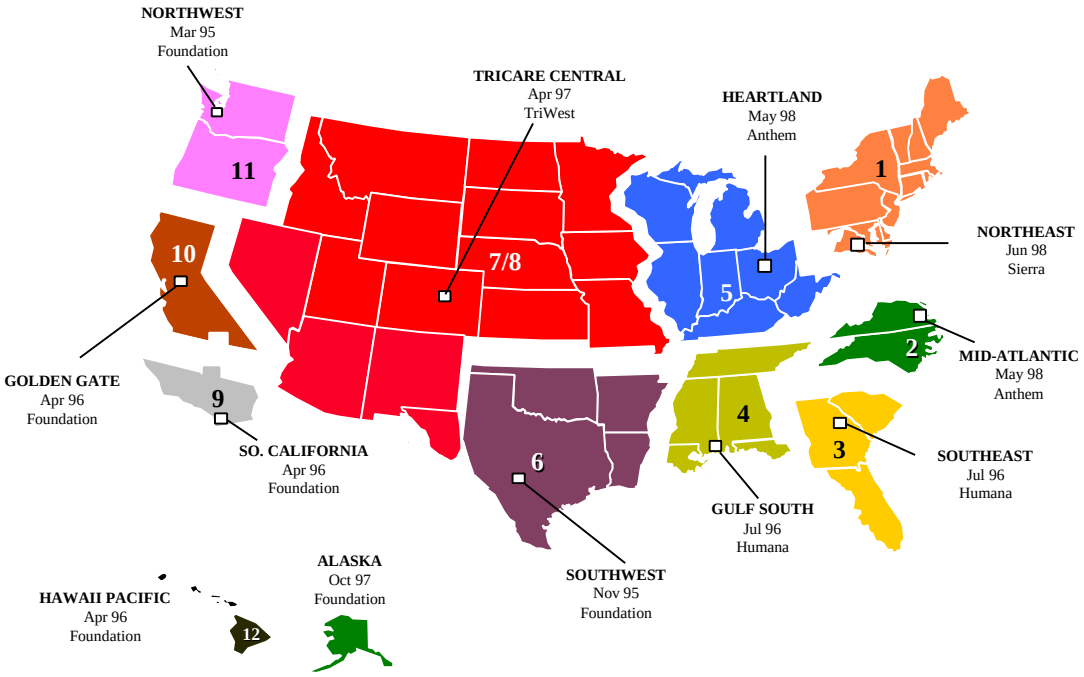

Figure 2-1. TRICARE Health Service Regions, Lead Agents, and Contractors

Because of the size and complexity of the program, the DoD phased in the implementation of TRICARE region-by-region over approximately a 3-year period. Health care is arranged under a Managed Care Support (MCS) contract that supplements the care provided in MTFs. Table 2-1 shows the MCS health care delivery start dates and the number of beneficiaries enrolled under active contracts, by region, as of July 2000. The current evaluation covers Regions 3, 4, 6, 7/8, 9, 10, 11, and 12.

Table 2-1. TRICARE Enrollment Status (July 2000)

TRICARE Region	Beneficiary Population	Prime Start Date	Enrollment		
			Active Duty	Active Duty Family Members	Retirees and Family Members
1. Northeast	1,036,189	Jun 98	136,476	175,459	129,131
2. Mid-Atlantic	839,300	May 98	136,511	219,723	69,305
3. Southeast	1,068,362	Jul 96	105,593	198,777	141,322
4. Gulf South	596,742	Jul 96	53,555	103,142	76,631
5. Heartland	663,879	May 98	64,501	105,799	62,281
6. Southwest	968,165	Nov 95	117,213	212,543	152,571
7/8. Central	1,097,740	Apr 97	136,072	217,222	134,813
9. Southern California	617,838	Apr 96	82,585	149,110	69,070
10. Golden Gate	274,337	Apr 96	18,207	40,342	39,271
11. Northwest	374,468	Mar 95	39,609	87,188	64,480
12. Pacific (Hawaii)	148,472	Apr 96	30,789	55,713	10,382
Western Pacific	168,636	Oct 96	96,301	58,974	328
Alaska	70,649	Oct 97	17,797	25,056	8,586
Europe	299,877	Oct 96	109,838	129,909	577
Latin America	38,032	Oct 96	5,957	9,763	0

Note: Beneficiary population as of January 2000 from "TRICARE Regions at-a-Glance" report dated 17 July 2000. Enrollment figures as of July 2000 from Defense Enrollment Eligibility Reporting System.

2.1 The Three TRICARE Options

TRICARE offers beneficiaries three options—Standard, Extra, and Prime. The following subsections provide descriptions of each option. Table 2-2 shows the cost-sharing features of the three options.

2.1.1 Standard

TRICARE Standard is the new name for the health care option formerly known as CHAMPUS (a DoD-administered indemnity plan). All persons eligible for military health care, except active-duty members and most Medicare-eligible beneficiaries, can use TRICARE Standard. No enrollment is required. Under this option, eligible beneficiaries can choose any civilian physician they want for health care, and the government will pay a percentage of the cost.

For active-duty families, TRICARE Standard pays 80 percent of the CHAMPUS Maximum Allowable Charge (CMAC) for outpatient health care after the annual deductible has been met. For retirees and their families, TRICARE Standard pays 75 percent of the CMAC.

Active-duty family members pay $10.85 per day or a $25 minimum fee for inpatient care at civilian hospitals. Retiree families pay considerably more: $390 per day or 25 percent of the charges, whichever is less. Also, retiree families must pay 25 percent of the cost for any separately billed physician and professional fees, which can amount to an additional, several hundred dollars per day.

Beneficiaries can seek care from a military hospital or clinic before receiving care from civilian sources (beneficiaries residing in a catchment area *must* first seek care from a military hospital for inpatient care and for selected outpatient procedures). Outpatient visits, when available, are free, as are prescriptions filled at the MTF pharmacy. For inpatient care, MTFs charge flat fees of $7.50 per day for active-duty personnel and retired officers; retired enlisted personnel are exempted. All others pay $10.85 per day. Finally, TRICARE Prime enrollees receive first priority for care in MTFs.

2.1.2 Extra

All persons eligible for military health care, except active-duty and most Medicare-eligible beneficiaries, can use a network of preferred providers under TRICARE Extra. Like TRICARE Standard, no enrollment is required for TRICARE Extra. Beneficiaries simply use the network providers, who have agreed to charge a discounted rate for medical treatment and procedures. The rates are discounted from the CMACs, as agreed upon with the MCS contractor.

As with TRICARE Standard, the government shares the costs of health care. For using this network of preferred providers, the government pays an additional 5 percent of outpatient costs incurred. This saving applies equally to active-duty families and retirees, raising the government's cost shares to 85 percent and 80 percent, respectively. Although outpatient costs are subject to a deductible, prescriptions filled under Extra receive first-dollar coverage (unlike prescriptions filled under Standard). Health-care providers participating in the Extra network also agree to use the allowable rate schedule (based on a discount from the CMAC rates), so the beneficiaries do not incur any additional charges.

Another advantage of TRICARE Extra is that participating providers will always file claims for the patient. With TRICARE Standard, some eligible beneficiaries may occasionally have to pay for their health care first and then apply for reimbursement. With TRICARE Extra, the participating provider is paid directly by the MCS contractor, requiring the patient to pay only the cost share amount at time of treatment.

Beneficiaries can also use a combination of health care professionals—some who are part of the Extra network and others who are not. Because there is no formal enrollment in either TRICARE Standard or TRICARE Extra, beneficiaries are free to switch back and forth among providers as they prefer. Beneficiaries can continue to seek care from a military hospital or clinic on a space-available basis. They can also seek care from civilian sources subject to the same restrictions for beneficiaries residing in catchment areas.

Table 2-2. TRICARE Cost-Sharing Features

	TRICARE Prime	TRICARE Extra	TR
Choice of civilian doctors, hospitals, clinics	Must choose from government-approved network	Can choose from government-approved network for lower cost	Unlimited
Annual enrollment fees			
All active duty[a]	None	None	None
Retirees	Individual: $230 Family: $460	None	None
Annual outpatient deductibles			
E-4 and below[a]	None	Individual: $50 Family: $100	Individual Family: $1
All other active duty[a]	None	Individual: $150 Family: $300	Individual Family: $3
Retirees	None	Individual: $150 Family: $300	Individual Family: $3
Catastrophic cap			
All active duty[a]	$1,000	$1,000	$1,000
Retirees	$3,000	$7,500	$7,500
Copayments for visit to civilian doctor			
E-4 and below[a]	$6	15 percent[c]	20 percent
All other active duty[a]	$12	15 percent[c]	20 percent
Retirees	$12	20 percent[c]	25 percent
Prescription drugs (retail network)			
All active duty[a]	$5	15 percent[c]	20 percent
Retirees	$9	20 percent[c]	25 percent
Mail order pharmacy			
All active duty[a]	$4 for up to a 90-day supply	$4 for up to a 90-day supply	$4 for up t
Retirees	$8 for up to a 90-day supply	$8 for up to a 90-day supply	$8 for up t

Table 2-2 (Continued)

	TRICARE Prime	TRICARE Extra	TR
Copayments at civilian hospitals for inpatient care			
All active duty[a]	$11 per day ($25 minimum per stay); $20 per day for mental health	$10.85 per day ($25 minimum per stay); $20 per day for mental health	$10.85 per stay);$ 20 health
Retirees	$11 per day ($25 minimum per stay); $40 per day for mental health	Less of $250 per day or 25 percent of hospital charges, plus 20 percent of professional fees; for mental health, 20 percent of all charges[c]	Lesser of $ percent of 25 percent mental hea day or 25
Ambulance service			
E-4 and below[a]	$10	15 percent[c]	20 percent
All other active duty[a]	$15	15 percent[c]	20 percent
Retirees	$20	20 percent[c]	25 percent
Outpatient surgery			
All active duty[a]	$25	$25	$25
Retirees	$25	20 percent[c]	25 percent
Preventive services	$0	Not covered	Not covere
Medical equipment patient takes home			
E-4 and below[a]	10 percent[b]	15 percent[c]	20 percent
All other active duty[a]	15 percent[b]	15 percent[c]	20 percent
Retirees	20 percent[b]	20 percent[c]	25 percent

Source: Adapted from *TRICARE Manual for Basic and Advanced Course*, May 13, 2000 and *TRICARE Special: A User's Guide*, Spec *Navy Times, Air Force Times*, March 6, 2000.

[a] Figures in the table apply to active-duty family members only. For active-duty service members, care is generally available at MTFs except for a $7.50 daily subsistence fee for inpatient stays.

[b] Percentages are applied to the CMAC. In addition, for non-participating providers, beneficiaries pay the excess above the CMA forbidden by law from charging more than 115 percent of the CMAC.

[c] Percentages are applied to the negotiated amount, which is less than the CMAC.

2.1.3 Prime

All active-duty military personnel are automatically enrolled in TRICARE Prime at their nearest MTF. All other persons eligible for military health care, except Medicare-eligibles, can enroll in TRICARE Prime. Enrollment is open at all times and is not restricted to any "open season." There are also no restrictions on enrollment based on pre-existing medical conditions.

Medicare-eligible retirees are not ordinarily eligible to enroll in Prime. However, this rule is being relaxed at six sites under the TRICARE Senior Project. Under this program, Medicare-eligible retirees will be able to enroll at selected MTFs, and the DoD will receive reimbursement from the Department of Health and Human Services (DHHS). Medicare rates are approximately equal to the CMAC rates and are typically higher than the discounted rates offered by network providers. Reimbursement will begin only after the DoD has expended the historical level of resources provided to care for Medicare-eligible beneficiaries. The two departments will work together to monitor the program and determine whether its expansion to other sites would prove cost effective.

Each enrollee chooses or is assigned a PCM. The PCM is a health-care professional or medical team that patients see first for their health-care needs. PCMs are supported by military and civilian medical specialists to whom patients are referred if they need specialty care. Referrals are facilitated by a Health Care Finder (HCF), a contractor employee who coordinates with the PCM to help beneficiaries find specialty care in the civilian community when the needs of the patient cannot be met by the MTF (HCF services are available to all beneficiaries, not just those enrolled in Prime). Depending on the enrollees' status, the locale, and the availability of medical professionals, they can either select a PCM at a nearby military hospital or clinic or request a civilian professional who is a member of the contracted Prime network in a nearby community. In some cases, the Lead Agent may either direct patients to a military PCM at an MTF if there is unused capacity or assign them a civilian PCM if MTF capacity is exceeded.[2]

All beneficiaries enrolled in TRICARE Prime are guaranteed access to care according to strict time standards. Emergency services are available within the Prime service area 24 hours per day, 7 days per week. Primary care should be available within a 30-minute drive from the beneficiary's home. The maximum waiting times for primary-care appointments are 1 day for acute care; 1 week for routine, non-urgent care; and 4 weeks for health maintenance and preventive care. Specialty care should be available within a 1-hour drive from home, and the maximum waiting time for specialty-care appointments is 4 weeks.

Retirees and their families pay a fee of $230 per year to enroll in Prime, with a $460 family cap. In return for these fees, enrollees make nominal copayments and are not required to meet a deductible. TRICARE Prime covers a variety of preventive and wellness services. Examples of such services include eye examinations, immunizations,

[2] Throughout this report, the term "military PCM" refers to a provider at a military facility, regardless of whether the provider is in the uniformed services or a civilian. Similarly, the term "civilian PCM" refers to a provider at a network facility.

hearing tests, mammography, Pap smears, prostate examinations, and other cancer-prevention and early-diagnosis examinations. All clinical preventive services are free under Prime, whether performed at an MTF or at a network facility.

Non-active-duty Prime enrollees can seek care from non-network providers through a point-of-service (POS) option, but they must pay a substantial penalty in the form of an even higher cost share than under TRICARE Standard.

2.1.4 Overseas Programs

TRICARE overseas programs have been implemented in Europe, the Western Pacific, Alaska, and Latin America under agreements with individual providers rather than through at-risk contractors. On October 1, 1999, the TRICARE Prime option was extended to Puerto Rico as well. TRICARE overseas offers two options: Prime and Standard. The Prime option is currently open to all active-duty personnel and family members who choose to enroll. The Prime benefit is the same as in the United States, except that the copayment is waived (except in Alaska) for family members who must obtain care from host-nation sources.

2.2 Supplemental Programs

Beginning in FY1998, the DoD introduced several new programs that could potentially affect subsequent evaluations of the TRICARE program. The new programs are:

- TRICARE Senior (Medicare subvention) demonstration,
- TRICARE Senior Supplement demonstration,
- TRICARE Dental Program,
- National Mail Order Pharmacy program,
- Federal Employees Health Benefits Program demonstration,
- TRICARE Prime Remote, and
- Pharmacy Redesign Pilot Program.

TRICARE Senior and the National Mail Order Pharmacy programs began operations in 1998 while the remaining programs are scheduled to be implemented in FY 2000 or later. A brief description of each program follows.

2.2.1 Medicare Subvention Demonstration

In February 1998, the DHHS, the Health Care Financing Administration (HCFA), the DoD, and the OASD(HA) completed a Memorandum of Agreement to conduct a demonstration, or test project, under which the DHHS would reimburse the DoD from the Medicare Trust Fund for certain health care services provided to Medicare-eligible military (dual-eligible) beneficiaries at MTFs or through contracts. The program, called TRICARE Senior Prime (TSP), was authorized by Section 1896 of the Social Security Act, amended by Section 4015 of the Balanced Budget Act of 1997 (Public Law 105-33) and amended a second time by The Balanced Budget Refinement Act of 1999. The demonstration was ultimately designed to test the feasibility of establishing Medicare managed care plans within the DoD TRICARE program for dual-eligible beneficiaries. These TSP plans are intended to expand access to military health care services, enhance

the quality of health care delivery, and maintain budget neutrality. The statute authorized the DoD and the DHHS to conduct a 3-year Medicare Subvention Demonstration. Without legislation to extend or expand the demonstration, it is scheduled to end in December 2000.

The original legislation authorized two types of health care delivery systems: TRICARE Senior Prime and Medicare Partners. Under TRICARE Senior Prime, the Medicare program treats the DoD and its Military Health System (MHS) similar to a Medicare+Choice plan for dual-eligible Medicare/DoD beneficiaries. Medicare will pay for dual-eligibles enrolled in the DoD managed care program after DoD meets its current level of effort, measured in terms of health care expenditures for the dual-eligible population. Medicare-eligible military retirees who enroll in the program must select a PCM at the MTF. Enrollees are referred to specialty care providers at the MTF and to participating members of the existing TRICARE Prime network. TRICARE Senior Prime enrollees are afforded the same priority access to MTF care as military retiree families enrolled in TRICARE Prime. Under Medicare Partners, DoD will receive payment from Medicare+Choice plans whenever DoD enters into a contract with a Medicare+Choice Organization and provides inpatient or physician specialty care services to dual-eligible beneficiaries enrolled in those plans. No Medicare Partners agreement has been established to date, and will probably not be established before the end of this calendar year.

Under Medicare subvention, the DoD, for the first time, is able to enroll its Medicare-eligible retirees into the TRICARE Prime program (as a TRICARE Senior Prime beneficiary), and receive Medicare reimbursement. The Secretary of Defense and the Secretary of Health and Human Services selected six demonstration sites to test this TRICARE initiative in 1998. Eligible beneficiaries can enroll in TRICARE Senior Prime during the annual open enrollment period or by "aging-in"[3] to the program. Table 2-3 shows the health care delivery start dates, the number of eligible beneficiaries enrolled by open enrollment and "aging-in" to the program, and MTF capacity for this program by region.

The MTFs participating in the demonstration were required to apply and be approved as Medicare+Choice organizations. Military retirees enrolling in the demonstration must have received some care from military providers in the past or have become Medicare-eligible after December 31, 1997. Also, TRICARE Senior Prime enrollees must

- be age 65 or older,
- live within the geographic service area,
- be eligible for care in the MTF and also eligible for Medicare on the basis of age,
- be enrolled in Medicare Parts A and B,
- continue to pay monthly Medicare Part B premiums, and
- agree to have all their care provided by or coordinated through their PCM.

[3] Beneficiaries enrolled in TRICARE Prime with a military PCM at one of the demonstration sites are offered enrollment in TRICARE Senior Prime when they become Medicare eligible (usually at age 65). This is called "aging-in" enrollment.

Beneficiaries in TRICARE Senior Prime do not pay the annual TRICARE Prime enrollment fee. To participate in Medicare Partners, a military retiree must be enrolled in a Medicare+Choice plan that contracts with one of the participating MTFs.

Table 2-3. TRICARE Senior Prime Status (July 2000)

Region/ Demonstration Site	Eligible Population[a]	Start Date	Enrollment			
			Open	Open and Aged-In	TSP Capacity at Facility	Open as Percent of Capacity[b]
2. Dover AFB	3,905	1/1/99	931	1,002	1,500	62.1%
4. Keesler AFB	7,361	12/1/98	2,777	3,357	3,100	89.6
6. Brooke Army Medical Center/ Wilford Hall Medical Center	34,148	10/1/98	9,944	12,065	10,000	99.4
Texoma (Sheppard AFB/Fort Sill)	7,067	12/1/98	2,075	2,438	2,700	76.9
8. Ft. Carson/Air Force Academy/Peterson AFB	13,689	1/1/99	3,184	3,935	3,200	99.5
9. Naval Medical Center, San Diego	35,619	11/1/98	3,972	4,600	4,000	99.3
11. Madigan Army Medical Center	21,709	9/1/98	3,313	4,431	3,300	100.4

[a] Beneficiary counts reflect total number of beneficiaries eligible for open enrollment as of 2nd quarter, FY 1998.
[b] The number of enrolled TSP members may exceed TSP capacity, as "aged-in" does not count towards TSP capacity.

Health care delivery under TRICARE Senior began on September 1, 1998 at Madigan Army Medical Center. All six demonstration sites had begun health care delivery as of January 1, 1999. Because this program is available at only a few sites with small enrollment, its impact on this year's evaluation should be minimal.

2.2.2 TRICARE Senior Supplement Demonstration

The Department of Defense (DoD) will implement the TRICARE Senior Supplement Demonstration Program to facilitate DoD payments on behalf of Military Health System (MHS) beneficiaries receiving Medicare benefits while enrolled in the TRICARE Program as a supplement to Medicare. The Supplement Demonstration, which offers enrolled members benefits similar to TRICARE Extra and Standard, serves as a secondary payer for Medicare coverage, reducing or eliminating most out of pocket expenses, and providing reimbursement for some services not covered by the Medicare program. Benefits of enrollment include access to the National Mail Order Pharmacy (see Section 2.2.4), use of TRICARE civilian network pharmacies, coverage for certain diagnostic and preventive services, extended mental health coverage, and coverage for health care services delivered outside the Continental United States.

While enrolled in the demonstration, enrollees may not receive health care, including pharmacy services, in military hospitals or clinics. Each eligible beneficiary who enrolls in the TRICARE Program under the TRICARE Senior Supplement Demonstration Program will pay an annual enrollment fee of $576. The demonstration program will run from April 1, 2000 to December 31, 2002.

To be eligible for the program, an enrollee must be a retired member of the Uniformed Services, a family member of a retired member of the Uniformed Services, or a survivor of a member of the Uniformed Services who died while serving on active duty for a period of at least 30 days. The enrollee must also be age 65 or older, eligible for Medicare Part A (Hospital Insurance), enrolled in Medicare Part B (Supplemental Medical Insurance), and reside in one of the demonstration sites. The selected demonstration program areas are Santa Clara, California, and Cherokee, Texas. As of July 31, 2000, this program has over 300 enrollees.

2.2.3 TRICARE Dental Program

The TRICARE Dental Program (TDP), awarded to United Concordia Companies, Inc. in April 2000, will be implemented and start health care delivery on February 1, 2001. The TDP combines the TRICARE Family Member Dental Plan (TFMDP) and the TRICARE Selected Reserve Dental Program (TSRDP). The TDP offers improved dental coverage for 3.1 million active duty family members, Selected Reserve, Individual Ready Reserve and their family members worldwide. It is a comprehensive, portable and affordable dental program that focuses on customer satisfaction through a contractor incentive program.

The five-year TDP contract contains many enhancements to the current TFMDP. The lock-in period for enrollment has decreased to 12 months and incorporates a contingency lock-in waiver for Reservists called up to active duty with less than twelve months remaining. It increases the annual maximum benefit coverage to $1,200 and the lifetime maximum for orthodontic care to $1,500. It also decreases cost shares for some procedures for junior enlisted personnel (paygrade E1 to E4). Enrollment in the TDP is voluntary and portable worldwide and current TFMDP and TRSDP enrollees will be automatically enrolled in the TDP. The contractor will handle all enrollments and direct bill enrollees for premiums in the absence of a payroll account.

The TDP is a comprehensive benefit package that builds on the TFMDP benefit package. Some of the additions to the TDP benefit package include general anesthesia, intravenous sedation, occlusal guards, athletic mouthpieces, additional oral evaluation per year, pulp vitality tests, sealants raised to age 18, orthodontic coverage for children raised to age 20, or 22 if enrolled in college, orthodontic coverage for spouses raised to age 22, and porcelain veneers and bleaching of discolorization on anterior teeth. The TDP also emphasizes diagnostic and preventive care, advancement of pediatric and adolescent oral health, and increased utilization by beneficiaries by providing positive and negative incentives to the contractor for improvements in these areas especially for those age 17 and under.

2.2.4 National Mail Order Pharmacy Program

In October 1997, the DoD contracted with Merck-Medco Managed Care to operate a National Mail Order Pharmacy (NMOP) program. The mail-order services provided by the individual MCS contractors are being consolidated, region by region, with the NMOP in an attempt to simplify ordering maintenance prescriptions by mail and reduce costs. Beneficiaries can still use the walk-in services of MTF or contractor pharmacies.

The following beneficiaries are eligible to participate in the NMOP:

- All active-duty service members worldwide,
- CHAMPUS-eligible beneficiaries residing in the Continental United States,
- Overseas CHAMPUS-eligibles with APO or FPO addresses,
- Medicare-eligible patients affected by a BRAC action (overseas beneficiaries must have an APO/FPO address),
- Medicare-eligible retirees enrolled in TRICARE Senior, and
- Uniformed Services Family Health Plan enrollees.

Beneficiaries can receive up to a 90-day supply of non- controlled medications and up to a 30-day supply of controlled medications. The service is free for active-duty service members, but there is a $4 copayment per prescription for active-duty family members and an $8 copayment per prescription for retirees and their family members. There are no deductibles for prescriptions filled through the NMOP.

The Pharmacy Data Transaction Service (PDTS) was activated within retail pharmacy networks and the NMOP program between July and September 2000. MTFs will begin activation between December 2000 and June 2001. The PDTS enhances patient safety by merging patient medication information from these disparate dispensing locations into a single data repository. Along with enhanced safety, the PDTS provides a robust reporting capability on pharmacy utilization.

2.2.5 Federal Employees Health Benefits Program Demonstration

In accordance with the National Defense Authorization Act for FY 1999, the DoD and the Office of Personnel Management have developed a demonstration program that allows some MHS beneficiaries to enroll with the Federal Employees Health Benefits Program (FEHBP) for their health care. The demonstration, which provides medical care for up to 66,000 retirees and their family members, gives the DoD an opportunity to collect valuable information about the cost and feasibility of alternative approaches to improving the access to health care for those beneficiaries.

The DoD initially selected eight sites for the FEHBP demonstration:

- Dover Air Force Base, Delaware;
- Commonwealth of Puerto Rico;
- Fort Knox, Kentucky;
- Greensboro/Winston-Salem/High Point, North Carolina;
- Dallas, Texas;
- Humboldt County, California area;
- Naval Hospital, Camp Pendleton, California; and
- New Orleans, Louisiana.

Under the demonstration, eligible beneficiaries can join the FEHBP during the enrollment open season in November of each year. Eligible beneficiaries include retirees over the age of 65 who are Medicare-eligible and their family members, former spouses

of military members who have not remarried, and family members of deceased members or former members. Medicare eligibility is not required for the family members of retirees and the latter two groups. Coverage began in January 2000 and is scheduled to end in December 2002.

Beneficiaries must enroll in an FEHBP plan and pay any applicable premiums to receive benefits. During the demonstration, enrollees cannot use MTFs for any services. Premiums will be based on a separate risk pool for MHS beneficiaries. The government's contribution will be computed in the same way as it is currently done under the FEHBP. As of July 31, 2000, beneficiaries enrolled in FEHBP totaled 2,655.

In May 2000, the DoD announced it was expanding the FEHBP demonstration program to areas surrounding Coffee County, Georgia and Adair County, Iowa. The former site includes parts of Georgia, Florida and South Carolina; the latter site encompasses the entire state of Iowa (except within the Offutt Air Force Base catchment area), parts of Minnesota, South Dakota, Nebraska, Kansas and Missouri. The expanded demonstration will target about 25,000 eligible beneficiaries in each location, increasing to almost 120,000 the number of beneficiaries eligible for the demonstration. Coverage for new participants will begin in January 2001.

2.2.6 TRICARE Prime Remote

Section 731 of the FY 1998 National Defense Authorization Act directed the DoD to provide TRICARE Prime-like benefits to Active Duty Service Members (ADSM) nation-wide who work and live more than 50 miles from a military hospital or clinic.

In 1998, DoD issued a policy that members who meet the distance criteria above are immediately eligible for TRICARE benefits (with no deductible or cost-shares). Concurrently, DoD initiated contract modifications with every TRICARE managed care support contractor to introduce a standardized benefit for active duty service members nation-wide. This contract modification is known as the "TRICARE Prime Remote" program, and began October 1, 1999. As of July 31, 2000, there were 42,164 active-duty service members enrolled in the program, out of 47,028 eligibles (90 percent).

The TRICARE Prime Remote (TPR) program provides active duty service members with a TRICARE Prime-like benefit when stationed away from traditional sources for military health care. Where civilian Prime service areas exist, active duty members are enrolled to a civilian PCM. Where there are no Prime networks, active duty members may use any TRICARE authorized provider in the local community. No pre-authorization is required for primary care. A joint service office, known as the Military Medical Support Office (MMSO), provides the medical readiness reviews and fitness for duty oversight for specialty health care delivered by civilian providers. MMSO, based at Great Lakes Naval Station, IL, has been established and is providing 24-hour, 7 day per week coverage. The managed care support contractors provide enrollment services, Health Care Finder support and claims processing functions for service personnel enrolled in TPR. Active duty service members bear no costs for obtaining health care from civilian sources.

The 1998 law did not require, and the current contract modification does not include, the extension of "TRICARE Prime-like benefits" to the family members of active-duty

service members who accompany their sponsors to remote duty locations. A separate provision in the law (Section 712) required the DoD to study alternatives to extending the Prime benefit to family members who accompany the active-duty service member to a remote site. In August, 1999, the ASD(HA) submitted a report to Congress outlining TPR's actions to date and providing the cost estimate for extending TRICARE Prime co-payments to remote family members. A provision to extend coverage to active-duty family members is included in both the House and Senate versions of the FY2001 Defense Bill. Until an alternative is selected, active duty families remain eligible for TRICARE Standard.

2.2.7 Pharmacy Redesign Pilot Program

The DoD recently implemented a Pharmacy Benefit Pilot Program for DoD beneficiaries over the age of 65. This is taking place at two locations that were selected randomly after meeting congressionally mandated selection criteria. The pilot locations are Fleming, Kentucky and Okeechobee, Florida.

An eligible beneficiary is described as a member or former member of the Uniformed Services; a dependent of the member or former member of the Uniformed Services; or a dependent of a member of the Uniformed Services who died while serving on active duty for a period of at least 30 days, who meets the following requirements: (a) is 65 years of age or older, (b) is entitled to hospital insurance benefits under Medicare Part A (c) is enrolled in the supplemental medical insurance program under Medicare Part B, and (d) who resides in a pilot area.

The benefit for eligible beneficiaries will be equivalent to the TRICARE Extra pharmacy benefit with a $200 enrollment fee plus the applicable copayments. The copayments are 20 percent for up to a 30-day supply of medication from a TRICARE retail network pharmacy or $8 for up to a 90-day supply of medication from the NMOP.

3. ACCESS TO AND QUALITY OF HEALTH CARE UNDER TRICARE

The FY 1998[4] and 1999[5] evaluations measured changes in the TRICARE regions for which a full year of data under TRICARE was available. In summary, the results of the evaluations showed that under TRICARE:

- Access improved, and
- Most quality-of-care goals were met or nearly met.

The current FY 2000 evaluation looks at changes in 8 regions that have now been online for at least 1 year and have sufficient data for analysis. In addition, trends from 1994 to 1998 in access and quality of care in these regions are examined. Comparisons of satisfaction with health care under the DoD system to civilian health plans are also shown.

3.1 Methods and Data Sources

3.1.1 General Method

This year's evaluation of TRICARE's effects on the access to and quality of health care expands on the methodology that was used in previous years. In addition to measuring change from a pre-TRICARE base year to the current year, trends that include the intervening years are examined. Additionally, the DoD population was compared with the general U.S. population on various aspects of satisfaction with health care.

The evaluation uses data on access and quality of care collected before TRICARE was implemented in any region (1994) and after TRICARE had been enrolling people in Prime for about 1 year. Because the date of TRICARE enrollment differed across regions, the time between the baseline period and the follow-up also varied. The choice of the baseline period was, to a great extent, determined by the data available for the evaluation.

To isolate the effects of the TRICARE program, it was necessary to control for possible changes in the beneficiary population over time that could also affect access. These effects were controlled by statistical regression analysis. The control variables included measures of health status of the population and various demographic characteristics. The summary data reported here are estimated from regression models, which hold health status and demographics constant at the FY1998 population means. This allows an estimation of how the current (FY 1998) population would have perceived access and quality factors in FY 1994, in the absence of TRICARE.

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[4] Peter H. Stoloff, Philip M. Lurie, Matthew S. Goldberg, Richard D, Miller, and Ravi Sharma, *Evaluation of the TRICARE Program: FY 1998 Report to Congress*, 18 September 1998.

[5] Peter H. Stoloff, Philip M. Lurie, Lawrence Goldberg, and Matthew S. Goldberg, *Evaluation of the TRICARE Program: FY 1999 Report to Congress*, 31 October 1999.

The initial intention was to construct a quasi-control group from which inferences could be made on how access and quality would have been experienced under *status quo* conditions—had TRICARE not been implemented. The aim in constructing a quasi-control group is to find a subpopulation of beneficiaries who were unaffected by TRICARE.

The use of a control group would allow for the separation of the effects of changes that would have occurred in the absence of TRICARE. For example, suppose there were advances in telephone appointment technology that would have been implemented even if the current TRICARE system did not exist. Further, suppose that this system would remove barriers to making medical appointments, which would, in turn, reduce waiting time for an appointment by 1 day. At the same time, suppose that measures, before and after TRICARE implementation, of the number of days people wait for an appointment shows an improvement of 2 days. The reduction in days waiting for a medical appointment *attributable to TRICARE* would actually be only 1 day after the exogenous effect is removed.

After statistical investigation, however, no group that was unaffected by the TRICARE program in FY 1998 could be identified. Therefore, it was necessary to use a before-and-after design for the current evaluation in lieu of one with a control group. This methodology compares measures of access and quality-of-care outcomes in 1998 with historical outcomes measured in 1994, before TRICARE was implemented anywhere. A disadvantage of a before-and-after design is the possible confounding of TRICARE effects with other influences.

Despite this shortcoming, the before-and-after procedure was used as the method of analysis, and all changes in outcome measures are being attributed to TRICARE. No one knows what would have happened in the absence of TRICARE.

3.1.2 Data Sources (DoD Surveys)

The data come from the 1994, 1996, 1997, and 1998 administrations of the Health Care Survey of DoD Beneficiaries. The focus of the surveys was the perceived access to and quality of health care. The surveys sampled representative cross sections of all beneficiaries—regardless of whether they had used the health care system. This permits the possible identification of lack of access as the reason for not using the military health care system.

These surveys were not specifically designed to measure changes over time. This is evident from the different phrasing of questions and the different response scales used in the surveys. Other limitations of using the surveys to measure changes are related to the context in which perceptions about interactions with the health care system were elicited. Respondents were asked to evaluate access on the basis of experiences of the past 12 months. This becomes somewhat problematical when trying to isolate experiences since enrolling in Prime—which may have occurred within the past 12 months. For example, a response to the question, "Did you have trouble gaining access to health care during the past 12 months?" could be describing access before *or* after enrolling in Prime or both before *and* after enrolling.

While it was not possible to determine whether those enrolled in Prime for fewer than 12 months were responding to encounters with the medical system before or after enrollment, it was possible to compare responses of these enrollees with those who were enrolled for a full year (86 percent of Prime enrollees had been enrolled 12 or more months before being surveyed). Significant differences were found for 8 of the measures examined, as shown in Table 3-1.[6]

Table 3-1. Effect of Time Enrolled in Prime During FY 1998 on Selected Outcomes

	Months Enrolled	
Outcome Measure[a]	Less Than 12	12 and Greater
Met minor appointment wait goal	0.73	0.82
Met HP2000[b] goal for physical exam	0.58	0.52
Believes TRICARE improves preventive care	0.78	0.71
Met HP2000 goal for dental checkup	0.57	0.63
Met HP2000 goal for flu shot	0.85	0.64
Met routine appointment wait goal	0.93	0.90
Days waited for minor care appointment	3.14	2.68
Met minor appointment wait goal	0.73	0.82

[a] Significant difference on outcome for those enrolled less than 12 months.

[b] *Healthy People 2000*.

Based on the similar response patterns of these two groups of Prime enrollees, the responses of all Prime enrollees were treated as if they had been enrolled for the entire period.[7]

Most items in the 1994 survey had counterparts in the later surveys. Where the response alternatives differed for similar questions in the two surveys, the responses were rescaled for comparability. In some cases, this resulted in a loss of information. For example, in 1994, respondents were asked how long they had to wait between making a "generic" appointment and seeing their provider. In 1996, the question was refined to elicit wait-times for urgent and routine appointments and care for chronic problems and minor illnesses. When measuring change, it was necessary to collapse (or average) wait-times for the four different kinds of appointments in 1996 to be comparable to what was asked in 1994. In addition to reporting differences from 1994 to 1998 in the rescaled wait-time, the 1998 data are reported at the greater level of detail.

The survey used a variety of response scales. Satisfaction items were typically five-point scales, anchored by response alternatives "very satisfied" and "very

[6] Regression analyses were performed to test the significance of the coefficient of an indicator variable whose value was set to 0 if an individual had been enrolled less than 12 months when responding to the survey, or to 1 if the individual had been enrolled for the entire time. The full set of demographic control variables was also included.

[7] It was not possible to use a variable, such as "time enrolled in Prime," to control for bias associated with the ambiguity. The analysis compares future Prime enrollees in 1994 (those who will subsequently enroll) with Prime enrollees in 1998. A time-enrolled variable does not apply to those in the 1994 survey group; i.e., there would be zero variance for this group.

dissatisfied." Responses to these items were transformed to a two-point (dichotomous) scale of "satisfied" and "not satisfied."[8] Items thus transformed can then be reported in terms of the proportion of respondents who were "satisfied."

3.1.3 Subpopulations

Health-care beneficiaries were placed into four mutually exclusive and exhaustive *subpopulation* groups based on their Active duty status and source of health care:

- *Active duty*. Composed of survey respondents who were on Active duty (AD) when they completed a survey.
- *Prime*. Composed of 1994 non-AD [active-duty family members (ADFM) and retirees] survey respondents who subsequently enrolled[9] in Prime when the option became available (future enrollees), plus 1996–1998 non-AD survey respondents who enrolled in Prime before responding to the survey.[10]
- *All civilian care*. Composed of nonenrolled respondents who reported never having used an MTF during the survey recall period.
- *Other not enrolled*. Composed of nonenrolled respondents who received some of their care at MTFs as space-available care during the survey recall period and who may have received some of their care at civilian facilities.

Additional breakouts of the beneficiary population are provided based on whether the beneficiary was *retired* from the service, and for Prime enrollees, whether their PCM was military or civilian. Membership in the retiree group is independent of the source of care (i.e., retirees are also included in one of the non-AD subpopulations).

Table 3-2 shows the distribution of subpopulations in the 8 regions represented in the survey samples (see Appendix A for a detailed breakdown). The values shown in parentheses represent the proportion of non-active-duty beneficiaries in the population, and sum to one (100 percent) within a fiscal year. These data suggest that there has been a shift over time from those using MTF space-available (MTF/SA) to TRICARE Prime and civilian care as their source of health care. On average, 14 percent fewer (0.22–0.36) non-AD people used MTF/SA as their source of care. This was paralleled by a 4- and 14-percent shift into the civilian-care-only (0.46–0.42) and TRICARE Prime categories (0.36–0.22), respectively, for non-AD beneficiaries. The 16 percent enrollment rate for those in the 1994 baseline sample is relatively low. This is partly because some active duty

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[8] Responses of "very satisfied" and "somewhat satisfied" were scored as *satisfied*, and responses of "somewhat dissatisfied" and "very dissatisfied" were scored as *not satisfied*. In most instances, responses of "neither satisfied nor dissatisfied" were dropped because of the low statistical reliability of these responses. Principal Components Analysis of item clusters showed significantly higher reliability of scales that did not include respondents with no opinion, or those "neither satisfied nor dissatisfied." On an alternative response scale, responses of "excellent," "very good," and "good" were scored as *satisfied*; responses of "fair" and "poor" were scored as *not satisfied.*

[9] Subsequent enrollment in Prime by those in the 1994 sample was determined by searching the TRICARE Prime enrollment database maintained by the DoD.

[10] Includes those in the samples who may have also disenrolled before responding to the survey.

personnel subsequently leave the service prior to retirement and they and their family members are not eligible to join Prime.

The shift from space-available MTF care is a result of the introduction of managed care into the military environment. For the MTF to provide the health care benefits under the TRICARE Prime program, it was necessary to decrease space available care based on limited resources.

Table 3-2. Distribution of Subpopulations Estimated from the 1994 and 1998 Samples—All Evaluated Regions Combined

Military Status (Source of Care)	Proportion of Population			
	FY 1994		FY 1998	
	P(total)	P(non-AD)	P(total)	P(non-AD)
Active duty				
(All care)	0.24	–	0.22	–
Non Active duty				
(Prime care)	0.16[a]	(0.22)[a]	0.28[b]	(0.36)[b]
(Civilian-only care)	0.32	(0.42)	0.36	(0.46)
(Other not enrolled)	0.27	(0.36)	0.14	(0.18)
(Total)	0.76	(1.00)	0.78	(1.00)

[a] Proportion of non-AD who subsequently enrolled when Prime became available.

[b] Prime available in all regions sampled.

Regression analysis[11] was used to determine the statistical significance of the changes of the outcome variables over time and as the basis for estimating average values within subpopulations (as determined by military status source of care) for a given year. This was accomplished by using interaction terms between the year-of-survey variable and the indicator variables for the various subpopulations. Separate regression equations were estimated for each region. In addition, a regression equation aggregating over regions was also estimated.

The regression models were structured to isolate the effects of certain sources of variation in the access measures. The sources of variation accounted for include:

- Health status (SF-12 summary scales),
- Demographics (age, gender, ethnicity, marital status, education),
- Travel time to nearest MTF,
- In-catchment indicator, and
- Medical insurance coverage.

These controls, combined with indicator variables for "time" and subpopulation group (source of care and Active duty status of military sponsor), composed the explanatory variables used in the regression analyses.

[11] Logistic regression was used for dichotomous outcome measures, and ordinary least squares linear regression was used for continuous measures, such as "number of days waited for appointment."

The survey data were weighted to adjust the sample composition to reflect the actual composition of the population more closely. The weight assigned to each respondent was related to the inverse probability of being in the sample. Using weighted data in regression analysis will often result in incorrect estimates of the standard errors and, hence, the significance levels of the coefficients. Although the weights have the desired effect of changing the means of the variables, they have the undesirable effect of underestimating the standard errors. The procedure suggested by Huber[12] and White[13, 14] was used to correct the standard errors for design effects and possible lack of independence of errors produced by weighting and sample stratification.

Changes in outcomes were evaluated from two perspectives. Following the procedures used in earlier reports, current year outcomes were compared to those of the 1994, pre-TRICARE baseline. Because more regions have been under TRICARE than in previous years, there are now sufficient data to evaluate trends.

3.1.4 Evaluation of Trends

Changes in outcomes for pre-TRICARE[15], one, two and three years after a region has begun enrolling people in Prime, were examined. Because the year of TRICARE startup varies across regions, the survey data used to represent an outcome for a person residing in a region under TRICARE for a particular amount of time will involve a different mix of regions and years. Table 3-3 shows which regions and survey year made up the "region maturity" groupings used in the analysis.

Table 3-3. Data-Year and Region-Groups for Trend Analyses

	Region							
Years into TRICARE	3	4	6	7/8	9	10	11	12
Baseline (1994)	1994	1994	1994	1994	1994	1994	1994	1994
+1	1998	1998	1997	1998	1997	1997	1996	1997
+2			1998		1998	1998	1997	1998
+3							1998	

3.1.5 Presentation Scheme

Over the course of the evaluation, an attempt was made to identify TRICARE effects that were common to the regions examined. The results shown in this section are

[12] Peter J. Huber, The behavior of maximum likelihood estimates under non-standard conditions. In *Proceedings of the Fifth Berkeley Symposium in Mathematical Statistics and Probability*. Berkeley, California: University of California Press, 1, 221–233, 1976.

[13] Halbert White, A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica* 48: 817–838, 1980.

[14] Halbert White, Maximum likelihood estimation of misspecified models. *Econometrica* 50: 1–25, 1982.

[15] Ideally, the pre-TRICARE measurement should be made in the same time interval for all regions; just prior to the region going online. However, because it is desired to identify those in the pre-TRICARE era who will eventually enroll in Prime, and these data were only available in 1994, that year was used as the baseline.

aggregate results that combine the data across regions. Appendices A through G show the results of parallel analyses performed at the regional level. However, significant departures from the aggregate results are identified.

Tables showing breakouts by subpopulation summarize results by beneficiary source of care. Although Active duty personnel are Prime enrollees, they are broken out separately. The column labeled *total* represents an estimate for the entire beneficiary population, regardless of source of care or military status.

3.2 Subpopulation Characteristics

Population demographics and health status can moderate people's perceptions about health care and are related to the need for services. For example, analysis of the changes in perceptions of overall quality of care (all 8 regions combined) indicates a 7-percentage-point rise from 1994 to 1998. The age of the beneficiary is related to perceptions of overall quality—each year of age contributes 0.5 percentage point to the satisfaction level. The difference in the average ages of the 1994 and 1998 populations is 4 years, which accounts for 2 percentage points of the increase in satisfaction. Therefore, the TRICARE effect is actually a 5-percentage-point gain, after adjusting for age differences in the 1994 and 1998 populations.

Tables 3-4 and 3-5 show the changes in demographics over the evaluation period. In particular, beneficiaries in 1998 were:

- older,
- better educated,
- more likely to have private insurance,
- less likely to live in catchment,
- more likely to be married,
- healthier, and
- traveling farther to get to an MTF.

The increased travel time to an MTF and the higher likelihood of having private insurance were identified in last year's evaluation. The trends continue for a broader scope of the population (i.e., 8 regions). These and the other changes were statistically controlled for in this analysis. (See Appendix B for regional demographics.)

Table 3-4. Comparison of Control Variables Between the 1994 and 1998 Populations—All Evaluated Regions and Groups Combined

Measure	FY94	FY98
Married	0.76	0.79*
Age	46	50*
Male	0.52	0.54
Health status (mental)	52	53*
Health status (physical)	45	48*
Travel time to provider less than 30 minutes	0.87	0.83*
Hispanic	0.06	0.05
African American	0.09	0.09
High School graduate	0.73	0.68
College degree	0.22	0.28*
Other insurance	0.47	0.57*
Private insurance[a]	0.21	0.25*
Medicare (Part B)	0.17	0.19*
CHAMPUS supplemental insurance	0.14	0.41*
In catchment	0.72	0.66*

*Indicates statistically significant change ($p < .05$).

[a] Includes plans such as Blue Cross, Kaiser (HMO, or otherwise).

Table 3-5. Control Variable Means in the 1998 Population—All Evaluated Regions Combined

	Military Status / Source of Care			
	Active Duty	Non-Active-Duty		
Measure	All	Prime	Civilian Only	Other Nonenrolled
Married	0.70	0.86	0.82	0.78
Age	32	47	60	56
Male	0.84	0.35	0.50	0.51
Health status (mental)	52	52	54	52
Health status (physical)	52	48	46	45
Travel time to provider < 30 minutes	0.86	0.79	0.86	0.78
Hispanic	0.09	0.06	0.03	0.05
African American	0.15	0.10	0.04	0.08
HS graduate	0.69	0.70	0.64	0.70
College degree	0.31	0.24	0.32	0.24
Other insurance[a]	0.20	0.36	0.90	0.70
Private insurance	0.07	0.15	0.43	0.26
Medicare (part B)	0.00	0.10	0.34	0.31
CHAMPUS supplemental insurance	0.17	0.28	0.62	0.51
In catchment	0.92	0.76	0.44	0.66

3.3 Changes in Access

Access to health care continues to improve under TRICARE. Enrollees in TRICARE Prime are generally satisfied with their level of access to the health care system. There

was a tendency for those enrolled with a military PCM to report greater levels of satisfaction with access than those enrolled with a civilian PCM.

Three categories of access were examined to reach this conclusion:

- Realized access, based on use of preventive care,
- Availability and ease of obtaining care, and
- Efficiency of the process of receiving care.

A set of measures was developed for each of these categories.

Realized access. One class of measures that relates to the use of care has been termed *realized access*. These measures are used to indicate the ability of people to gain entry to the health care system. Medical visits for preventive care (well-care), as well as visits for illness and injury, fall into this category.

For preventive-care measures, estimates were made of the proportion of beneficiaries who, in a 12-month period, reported having a:

- Physical examination,
- Blood pressure reading,
- Cholesterol screening,
- Gynecological examination (women only),
- Mammogram (women only),
- Prostate exam (men only).

Availability. Availability addresses the issue of whether people are able to get care when they feel they need it. Measures of availability that were examined include:

- Being able to get care at one's facility of choice,
- Being able to see a particular doctor, and
- Access to one's provider by telephone.

Having a usual source of care should improve one's ability to obtain care, and it is often the first step in gaining access to the system. Under the Prime option, all enrollees are assigned a PCM and, therefore, do have a usual source of care [other than the emergency room (ER)].

Another measure of the availability of care is being able to visit the facility of choice. As mentioned earlier, with the inception of the Prime option came a priority system for appointments at the MTF. Active duty personnel and those enrolled in Prime get first priority for appointments. This could potentially squeeze out others depending on space-available appointments.

The following additional measures of health care availability were also used:

- Access to health care when needed,
- Access to specialists,
- Access to hospital care,
- Access to care in an emergency,

- Availability of advice over the telephone, and
- Availability of prescription services.

Process. Another class of access measures is related to the process of gaining entry into the health care system. These process measures focus on administrative aspects of access, including making an appointment and waiting time to see a provider after arriving for the appointment. The following process measures of access were examined:

- Time waiting to see a provider (time between appointment and visit, and time waiting in office),
- Ease of making an appointment by telephone,
- Travel time to facility,
- Perceived convenience of location, and
- Perceived convenience of hours.

3.3.1 Realized Access

Two aspects of realized access were evaluated: general use of the health-care system (medical visits) and use for preventive care.

Table 3-6 shows that access, as measured by the use of medical care, rose dramatically in all regions during the period of analysis as TRICARE evolved. Prime enrollees had the highest level of access. (Regional measures of access are shown in Appendix C.)

Table 3-6. Changes in Proportion of Beneficiaries With a Medical Visit From 1994 to 1998

	Military Status / Source of Care							
	Active Duty		Non-Active-Duty				Total	
	All		Prime		Other [a]		All	
Region	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
3	0.71	0.86*	0.85	0.94*	0.84	0.92*	0.82	0.91*
4	0.74	0.88*	0.85	0.92*	0.82	0.93*	0.81	0.92*
6	0.73	0.87*	0.86	0.95*	0.84	0.92*	0.81	0.92*
7/8	0.73	0.85*	0.79	0.93*	0.82	0.90*	0.79	0.90*
9	0.72	0.81*	0.81	0.93*	0.86	0.91*	0.81	0.89*
10	0.69	0.90*	0.88	0.94*	0.88	0.91	0.86	0.92*
11	0.75	0.89*	0.84	0.94*	0.83	0.92*	0.82	0.92*
12	0.74	0.87*	0.79	0.95*	0.80	0.90*	0.78	0.90*
Total	0.73	0.86*	0.84	0.94*	0.84	0.92*	0.81	0.91*

[a] It was not possible to identify the source of medical care for those not reporting a visit to a health care provider. MTF space-available, civilian-care only, and "unclassifiables" are combined into the Other category.

* Indicates significant change ($p < .05$).

Emergency room use is another indicator of access. Lacking access to a "regular" source of care could result in the use of the ER for this purpose. Table 3-6 shows a dramatic drop in the use of ER visits.

Table 3-7. Changes in Proportion of Beneficiaries Using the ER (1994–1998)

	Military Status / Source of Care									
	Active Duty		Non-Active-Duty						Total	
	All		Prime		Civilian Care		Other Nonenrolled		All	
Region	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
3	0.48	0.32*	0.47	0.34*	0.34	0.23*	0.48	0.35*	0.42	0.29*
4	0.50	0.31*	0.49	0.31*	0.31	0.17*	0.49	0.39*	0.41	0.27*
6	0.50	0.33*	0.44	0.37*	0.30	0.25	0.49	0.43	0.42	0.33*
7/8	0.53	0.32*	0.54	0.31*	0.30	0.21*	0.52	0.33*	0.45	0.28*
9	0.41	0.31*	0.40	0.28*	0.33	0.24*	0.44	0.27*	0.39	0.27*
10	0.36	0.23*	0.32	0.25*	0.35	0.27*	0.44	0.40	0.38	0.28*
11	0.47	0.30*	0.50	0.36*	0.35	0.21*	0.51	0.34*	0.45	0.29*
12	0.55	0.30*	0.46	0.32*	0.30	0.17*	0.54	0.46	0.51	0.30*
Total	0.49	0.31*	0.46	0.33*	0.33	0.22*	0.49	0.37*	0.42	0.29*

* Indicates statistically significant change ($p < 0.05$).

TRICARE has emphasized well-care and preventive medicine. Table 3-8 shows a general increase in the receipt of preventive care from 1994 to 1998 for the beneficiary population as a whole. GYN procedures, including Pap tests, are an exception to this trend. When results are compared across subpopulations, Active duty personnel show decreased levels of realized care for about half of the measures examined.

Table 3-8. Changes in Realized Care Indicators From 1994 to 1998

	Military Status / Source of Care									
	Active Duty		Non-Active-Duty						Total	
	All		Prime		Civilian Care		Other Nonenrolled		All	
Measure	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
BP check	0.79	0.90*	0.78	0.91*	0.90	0.96*	0.89	0.96*	0.81	0.91*
Cholesterol check past year	0.44	0.37*	0.45	0.49*	0.68	0.67	0.60	0.60	0.52	0.52
Dental care past year	0.89	0.85*	0.45	0.60*	0.69	0.68	0.44	0.62*	0.60	0.68*
Flu shot past year	0.80	0.82*	0.34	0.35*	0.47	0.58*	0.46	0.50*	0.46	0.54*
Mammogram past year (40+)	–	–	0.65	0.65	0.72	0.71	0.68	0.69*	0.65	0.67
Mammogram past year (50+)	–	–	0.67	0.70	0.74	0.74	0.72	0.75	0.68	0.71*
PAP test past year	0.84	0.79	0.72	0.68	0.69	0.64*	0.73	0.67	0.69	0.66*
Physical exam past year	0.49	0.46*	0.49	0.54*	0.70	0.66*	0.56	0.59	0.55	0.55
Prostate check past year (age 40+)	0.42	0.39*	0.53	0.56*	0.70	0.70	0.67	0.68	0.57	0.60*
Prenatal care first trimester	–	–	0.93	0.90	–	–	–	–	0.93	0.90

Note: Procedures performed during the 12 months preceding the survey.
– Indicates insufficient data.
* Statistically significant difference; $p < 0.05$.

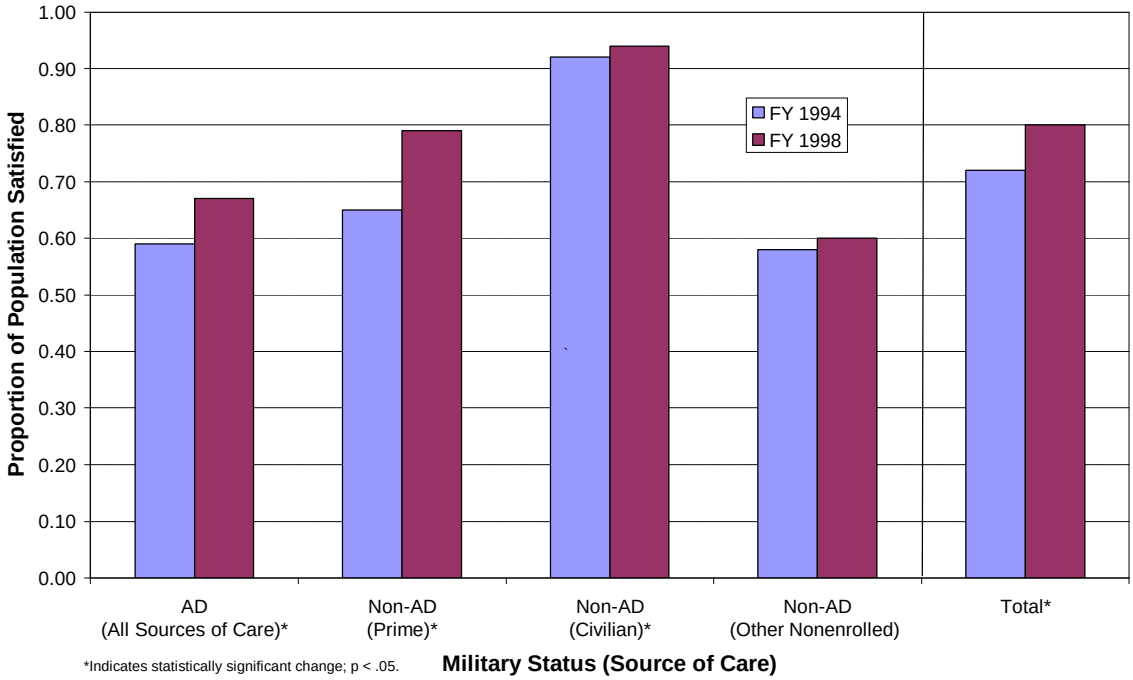


Figure 3-1. Getting Care When Needed—All Regions Combined (Excludes Regions 1, 2, and 5)

3.3.2 Availability of Care

There has been a perception of increased availability of care. A greater proportion of the population reported that they were able to get care when they felt they needed it, as shown in Figure 3-1. The pattern shown in the figure, which is a composite of the nine regions being studied, is similar for most regions, as shown in Table 3-9.

Table 3-9. Percentage Satisfied With Getting Care When Needed

	Military Status / Source of Care									
	Active Duty		Non-Active-Duty						Total	
	All		Prime		Civilian		Other Nonenrolled		All	
Region	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
3	61	63	64	79*	90	94*	56	55	72	79*
4	55	64*	61	78*	92	94	54	50	72	79*
6	56	66*	53	77*	91	94	51	55	67	78*
7/8	59	64*	63	81*	90	94*	55	65	70	81*
9	58	70*	79	80	94	95	75	76	77	81
10	60	75*	73	78	91	93	64	61	79	83*
11	60	73*	72	82*	94	96	57	59	75	83*
12	67	76	73	82	99	100	65	60	73	81*
All	59	67*	65	79*	92	94*	58	60	72	80*

* Statistically significant change from base year; $p < 0.05$.

The greatest increases in perceived access are among those who enrolled in Prime. Note, however, that the level of perceived access to care when needed, in general,[16] is considerably higher for those receiving care outside the military system (about 92 percent satisfied, with a 2-percentage-point increase over time). Thus, while TRICARE seems to result in an impression of improved access to care, it still has room for improvement.

Several additional measures of availability of care were examined. A similar pattern of increased availability of care was perceived. Table 3-10 gives the details.

Table 3-10. Availability Measures of Access—All Evaluated Regions Combined

	Military Status / Source of Care									
	Active Duty		Non-Active-Duty						Total	
	All		Prime		Civilian		Other Nonenrolled		All	
Measure	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
Satisfaction with:										
Access to care	0.59	0.67*	0.65	0.79*	0.92	0.94*	0.58	0.60	0.72	0.80*
Access to hospital care	0.69	0.76*	0.78	0.85*	0.95	0.96	0.68	0.70	0.80	0.86*
Access to emergency care	0.68	0.69	0.75	0.79*	0.92	0.95*	0.68	0.69	0.79	0.82*
Access to specialists	0.41	0.56*	0.56	0.73*	0.90	0.93*	0.46	0.55*	0.65	0.76*
Available information by phone	0.37	0.64*	0.52	0.75*	0.82	0.88*	0.42	0.57*	0.59	0.76*
Availability of prescription services	0.76	0.83*	0.83	0.87*	0.93	0.92	0.82	0.87	0.85	0.88*

* Statistically significant change from base year; $p < 0.05$.

3.3.3 Process of Obtaining Care

Two measures that reflect the process of obtaining care are the ease of making an appointment and the waiting time between making the appointment and seeing the health-care provider. As shown in Figures 3-2 and 3-3, TRICARE has made it easier to make a medical appointment, and people can see their providers more quickly.

[16] Includes specialty and primary care.

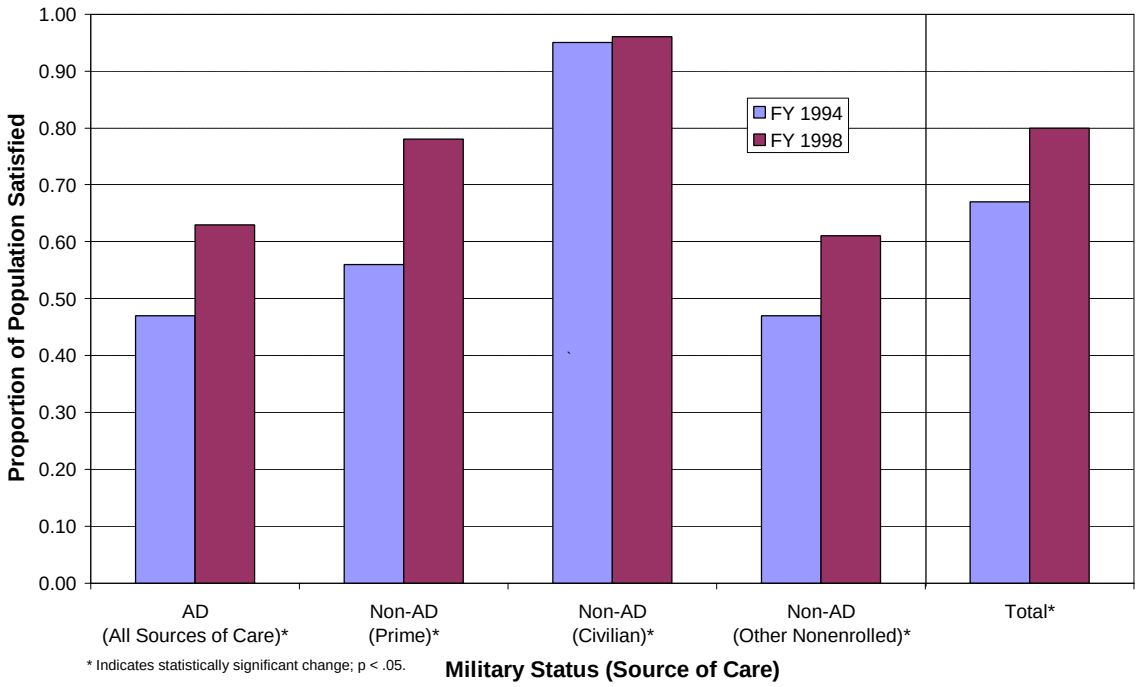


Figure 3-2. Ease of Making Appointments—All Regions Combined

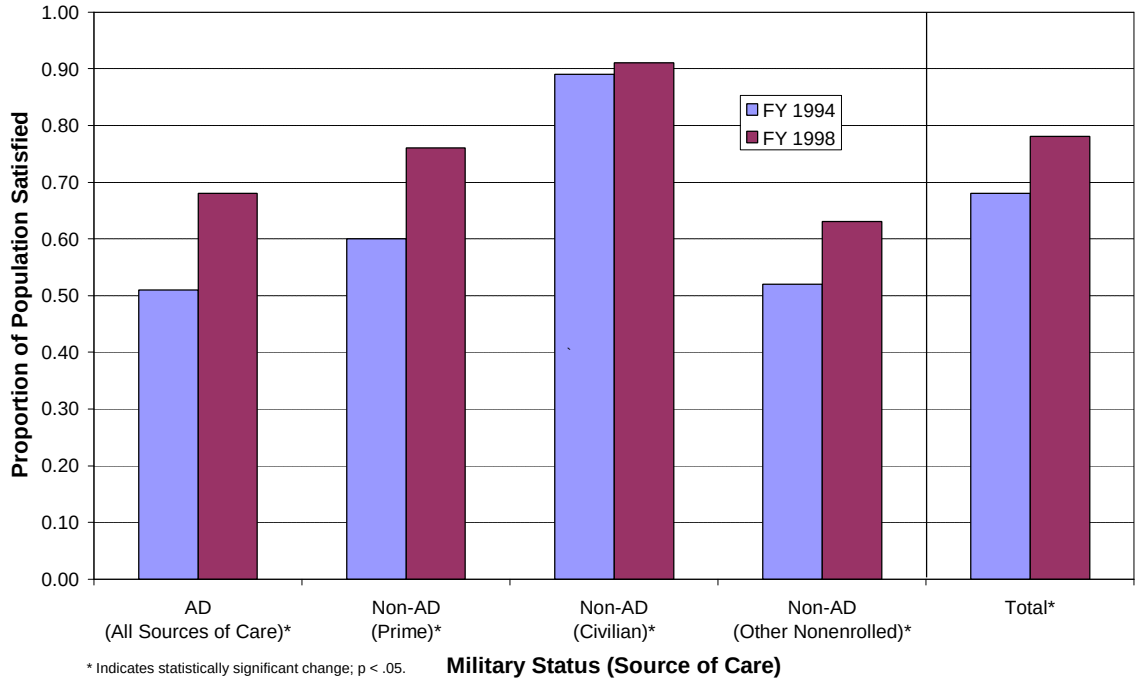


Figure 3-3. Wait Time for an Appointment—All Regions Combined

The gap between making an appointment and seeing a provider has dropped dramatically since 1994—particularly for Prime enrollees, whose wait times for

appointments decreased from about 13 to 6 days. Lack of specificity in the 1994 survey does not allow a breakdown of the type of care being sought. However, the 1998 survey data allow a finer level of detail.

Table 3-11 shows estimated waiting times and the percentage of a given subpopulation who were seen within TRICARE guidelines. Results are broken down by military and civilian providers. The estimates indicate that those receiving care from civilian providers generally have shorter wait times for appointments. TRICARE goals for appointment wait time are met about 90 percent of the time by both civilian and by military providers.

Table 3-11. Wait for a Medical Appointment (1998)

	Military Status / Source of Care					
	Active Duty	Non-Active-Duty				Total
Metric and Appointment Type	All	Military PCM	Civilian PCM	Civilian	Other Nonenrolled	All
Days waited						
Minor	1.7	2.8	2.4	2.0	3.9	2.2
Routine	12.5	12.6	12.4	11.5	13.9	12.2
Urgent	0.7	0.7	0.7	0.6	0.7	0.7
Proportion seen in specified time[a]						
Minor	0.90	0.80	0.84	0.89	0.76	0.87
Routine	0.92	0.92	0.89	0.90	0.87	0.91
Urgent	0.89	0.88	0.86	0.93	0.86	0.90

[a] Specified waiting times: minor (3 days), routine (30 days), urgent (1 day).

Table 3-12 lists other process measures that were examined. The general pattern shown in the data is for improved satisfaction with access under TRICARE, but the levels of satisfaction of those using the military system are considerably less than for those using the civilian-only care. In contrast to the previous years' evaluation, there has been an improvement in being able to make an appointment by telephone. This was observed for both those with military and civilian sources of care. On average the percentage of those who were able to get an appointment with 3 or fewer phone calls increased from 63 percent in 1994 to 90 percent in 1998.

Table 3-12. Process Measures of Access—All Evaluated Regions Combined

	Active Duty		Non-Active-Duty						Total	
	All		Prime		Civilian		Other Nonenrolled		All	
Measure	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
Satisfaction with:										
Convenience of hours	0.64	0.74*	0.79	0.86*	0.76	0.83*	0.94	0.96*	0.81	0.87*
Convenience of treatment location	0.81	0.86*	0.82	0.87*	0.72	0.77	0.91	0.94*	0.83	0.88*
Ease of making appointments	0.47	0.63*	0.56	0.78*	0.47	0.61*	0.95	0.96*	0.67	0.80*
Time from making to having appointment	0.51	0.68*	0.60	0.76*	0.52	0.63*	0.89	0.91	0.68	0.78*
Wait time in office	0.44	0.62*	0.60	0.74*	0.57	0.65*	0.84	0.85	0.65	0.74*
3 or fewer phone calls to get appointment	0.58	0.82*	0.57	0.87*	0.76	0.97*	0.51	0.82*	0.63	0.90*

* Statistically significant change from base year; $p < 0.05$.

3.3.4 Effects of Provider Type on Perceptions of Prime Enrollees

In general, more people are enrolled with military PCMs (75 percent). During 1998, the DoD did not have an explicit policy of assigning a particular physician to a Prime enrollee. In many cases, people are assigned to military clinics with no specific PCMs. However, if a person was allowed to enroll in the non-military network of civilian providers, he or she was typically able to choose a particular provider as PCM.

The previous TRICARE evaluation showed that, in 1997, free choice of a PCM had a profound effect on satisfaction with many aspects of the military health care system. The results indicated that Prime enrollees with military providers report greater levels of access than those with civilian providers, and those who get to choose their providers have higher satisfaction with the health care system. Unfortunately, the current survey data do not have information about choice of a PCM. Therefore, the effect of choice of PCM type could not be examined here.

The current survey data do allow a comparison of attitudes and other outcomes of TRICARE beneficiaries enrolled with different PCM types. Table 3-13 shows that those enrolled with a military PCM generally had more favorable attitudes and perceptions of access and quality of health care received (see Appendix D for regional statistics).

Table 3-13. PCM Type and Prime Enrollee Perceptions of TRICARE (Proportion of Subgroup—1998, All Evaluated Regions Combined)

Measure[a]	PCM Type	
	Civilian	Military
Satisfaction with:		
Access to health care if needed	0.74	0.80
Ease of making appointments	0.79	0.77
Outcome of health care	0.84	0.87*
Overall quality of care	0.86	0.88
Believe that:		
Prime improves access to care	0.70	0.74*
Prime improves access to preventive care	0.72	0.75*
It is easier to see specialist under Prime	0.42	0.53*
It is easier to get phone advice under Prime	0.61	0.72*
Prime saves money for care	0.76	0.78*
Would recommend Prime to a friend	0.76	0.88*

[a] Proportions based on those expressing an opinion other than "don't know."

* Statistically significant difference; $p < 0.05$.

As shown in Table 3-14, Prime enrollees with military PCMs also received higher levels of preventive care in 1998 than those enrolled with civilian PCMs.

Table 3-14. Preventive Care Received in 1998 from Civilian and Military PCMs

Preventive Care Measure	PCM Type	
	Civilian	Military
Breast exam past year (age 40+)	0.70	0.76*
Cholesterol test past 5 years	0.76	0.76
Dental care past year	0.63	0.61*
Flu shot (age 65+)	0.76	0.86
Mammogram past year (age 50+)	0.72	0.74
Ever had mammogram (age 40–49)	0.93	0.95*
Mammogram past 2 years (age 50+)	0.86	0.90*
PAP smear past 3 years	0.91	0.94*
Ever had PAP test	0.99	0.99
Physical exam past year	0.57	0.53
First trimester care	0.96	0.92
Prostate check	0.59	0.63

* Statistically significant difference; $p < 0.05$.

TRICARE comes close to meeting its goals for scheduling appointments for care. As shown in Table 3-15, Prime enrollees with military PCMshad to wait somewhat longer for appointments for minor care than those with civilian PCMs.

Table 3-15. Waiting Time for an Appointment for Civilian and Military PCMs (1998; Excludes Regions 1, 2, and 5)

Measure	PCM Type	
	Civilian	Military
Days waited for appointment		
Minor care (days)	2.39	2.83*
Routine care (days)	12.39	12.64
Urgent care (days)	0.72	0.67
Appointment goals		
Minor care (< 3 days)	0.84	0.80*
Routine care (< 30 days)	0.89	0.92*
Urgent care (1 day)	0.86	0.88*

* Statistically significant difference; $p < 0.05$.

3.4 Changes in Quality of Care

Quality of care has many dimensions. This evaluation considers two major aspects of quality: meeting national standards and quality of care as perceived by DoD beneficiaries. In a departure from the established methodology, standards are evaluated from the perspective of a single point in time, during 1998 when the 8 regions studied had been under the TRICARE program for at least 1 year. This approach was necessary because the 1994 survey did not include items designed to measure the achievement of many national goals. The methodology compares levels of quality achieved in 1998 with levels specified in the national goals.

3.4.1 Meeting Standards Under TRICARE

TRICARE Prime offers additional enhanced benefits that are not covered under TRICARE Standard. These enhanced benefits include such services as periodic examinations and preventive-care procedures. Counseling on well-care issues, such as nutrition, exercise, and substance abuse, are integrated into routine office visits. In addition, Prime offers increased continuity of care through the selection of a PCM, who either provides or coordinates all the beneficiary's health care services.

DoD has adopted as its standard the national health-promotion and disease-prevention objectives specified by the U.S. Department of Health and Human Services in *Healthy People 2000*.[17] Care levels under TRICARE were compared with these national standards. Prime covers specific well-care procedures at stated frequencies that tend to coincide with or exceed these national goals. Beneficiaries' survey responses were compared with the national objectives in the following areas:

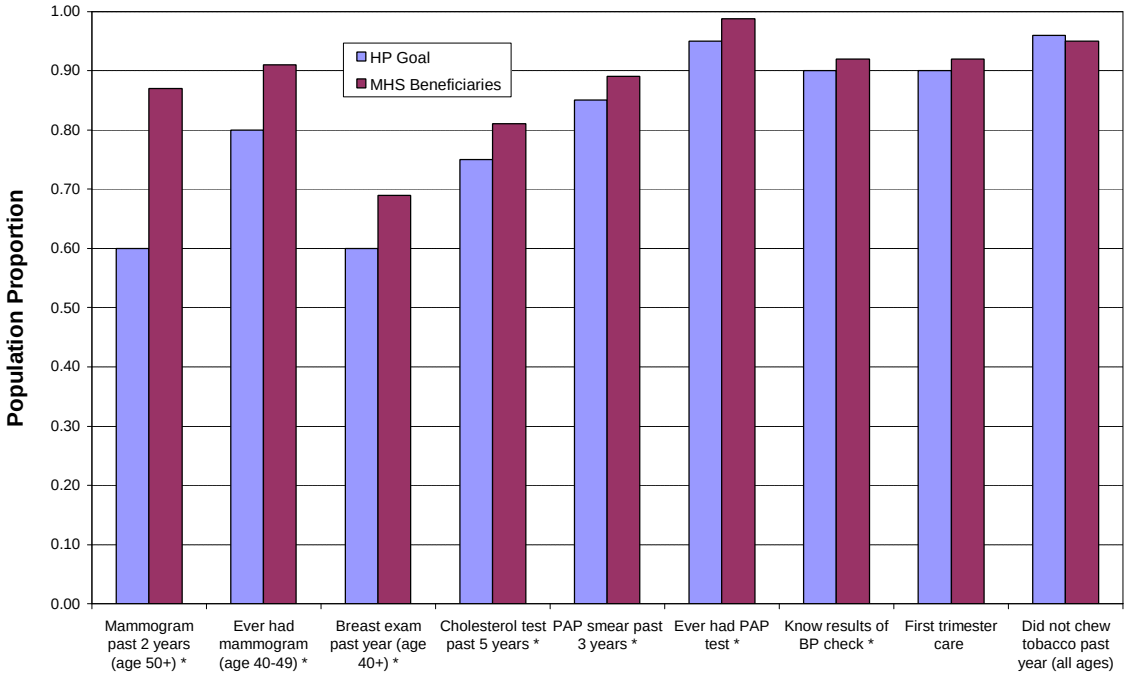
- Smoking cessation,
- Dental care,
- Prenatal care (first trimester),

[17] Department of Health and Human Services, Office of Disease Prevention and Health Promotion, *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*, 1991.

- Blood pressure checks,
- Cholesterol screening,
- Mammography, and
- Pap smears.

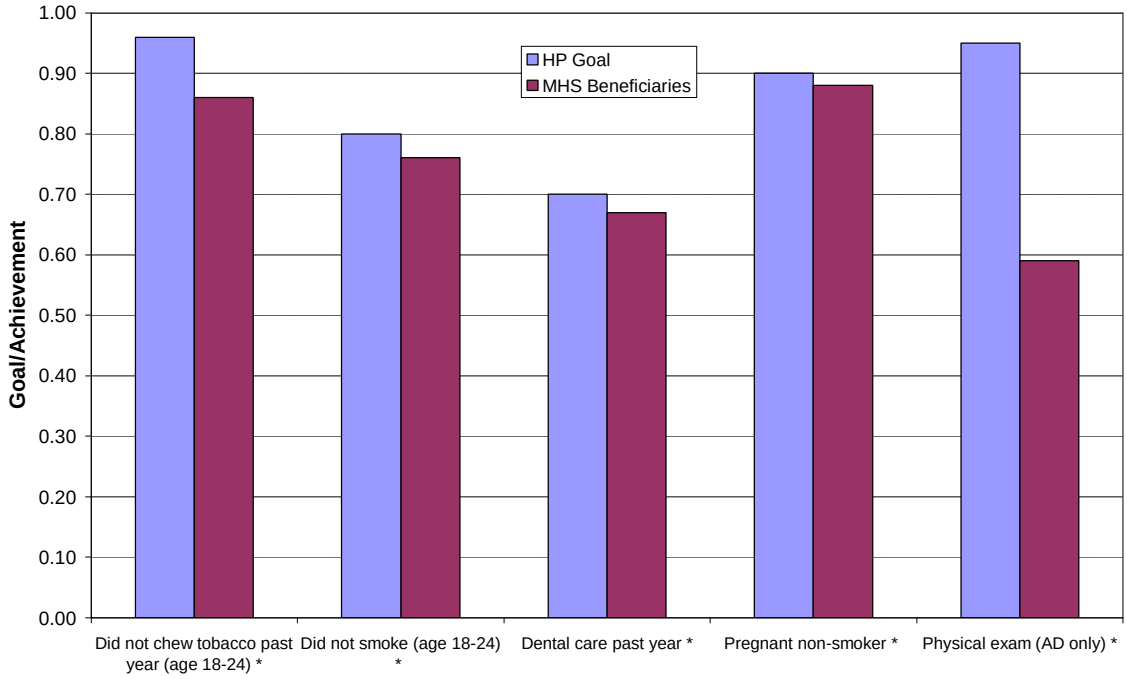
Healthy People 2000 identifies both current national care levels and target levels for the year 2000. It identifies outcome targets for such things as smoking cessation and immunizations. In 1987, for example, 30 percent of the 20- to 24-year-olds were regular cigarette smokers. The national target is to reduce that percentage to 15 percent by 2000. In addition, *Healthy People 2000* identifies targets for frequency of well-care procedures. For example, by 2000, the national objective is for 90 percent of the adult population to have had their blood pressure checked by a trained professional within the previous 2 years. The care levels under TRICARE were compared with these national targets.

Figures 3-4 and 3-5 show the average levels achieved, for those goals met and not met, respectively, in the eight TRICARE regions combined along with the *Healthy People 2000* goals. Results are shown for the total population only. Subpopulation results are shown in Table 3-16, and regional statistics are given in Appendix E. These data indicate that TRICARE is meeting (or nearly meeting) most of the *Healthy People 2000* goals examined. Shortfalls include: dental care, use of tobacco products (both cigarettes and chewing tobacco), and physical exams for active duty personnel.



* Indicates statistically significant difference between level achieved and goal ($p < .05$).

Figure 3-4. Achievement of *Healthy People 2000* Goals in 1998 (Entire Population, Averaged Across TRICARE Regions; Excludes Regions 1, 2, and 5)



* Indicates statistically significant difference between level achieved and goal ($p < .05$).

Figure 3-5. Shortfalls of *Healthy People 2000* Goals in 1998 (Entire Population, Averaged Across TRICARE Regions; Excludes Regions 1, 2, and 5)

Table 3-16. *Healthy People 2000* Goal Achievement by Military Status and Source of Care—All Evaluated Regions Combined (Proportion Meeting Goal)

		Military Status / Source of Care				
		Active Duty	Non-Active-Duty			Total
Measure	Goal	All	Prime	Civilian	Other Nonenrolled	All
Pregnant non-smoker	0.90	0.78*	0.92	0.91*	0.85	0.88*
Know results of blood pressure check	0.90	0.90*	0.95*	0.91*	0.96*	0.92*
Breast exam past year (age 40+)	0.60	0.73*	0.72*	0.69*	0.74*	0.69*
Did not chew tobacco past year (all ages)	0.96	0.86*	0.98*	0.98*	0.99*	0.95*
Cholesterol test past 5 years	0.75	0.74	0.85*	0.76*	0.91*	0.81*
Dental care past year	0.70	0.85*	0.61*	0.60*	0.68*	0.67*
Did not chew tobacco past year (age 18–24)	0.96	0.78*	0.96	0.95*	0.98	0.86*
Flu shot (age 65+)	0.96	n/a	0.78	0.78	0.79	0.77
Mammogram past year (age 50+)	0.60	n/a	0.75*	0.69*	0.73*	0.70*

Continued on next page

Table 3-16—*Continued*

Measure	Goal	Military Status / Source of Care: Active Duty	Non-Active-Duty			Total
		All	Prime	Civilian	Other Nonenrolled	All
Ever had mammogram (age 40–49)	0.80	0.96*	0.89*	0.93*	0.95*	0.91*
Mammogram past 2 years (age 50+)	0.60	n/a	0.92*	0.86*	0.89*	0.87*
PAP smear past 3 years	0.85	0.97*	0.90*	0.92*	0.88*	0.89*
Ever had PAP test	0.95	0.99*	0.99*	0.99*	0.99*	0.99*
Physical exam past year	0.95[a]	0.46	0.59	0.54	0.66	0.55
First trimester care	0.90	0.93	0.89	0.92*	0.97*	0.92*
Not smoke (age 18–24)	0.80	0.72*	0.81	0.79	0.84	0.76*

* Indicates statistically significant difference between level achieved and HP 2000 goal ($p < .05$).
n/a indicates insufficient data.
[a] Active duty only.

3.4.2 Perceptual Measures of Quality of Care

Changes in beneficiaries' perceptions of quality under TRICARE were examined based on their survey responses. The perception measures examined include beneficiaries' ratings of:

- Overall quality of health care,
- Thoroughness of examination,
- Ability to diagnose health care problems,
- Thoroughness of treatment,
- Skill of provider, and
- Perceived outcomes of the health care.

Figure 3-6 shows that the levels of perceived overall quality of care have increased significantly from 1994 to 1998. While there have been improvements in perceived quality by those receiving care in the military system, their levels still fall behind those using civilian care. Similar patterns were observed in most of the regions, as displayed in Table 3-17.

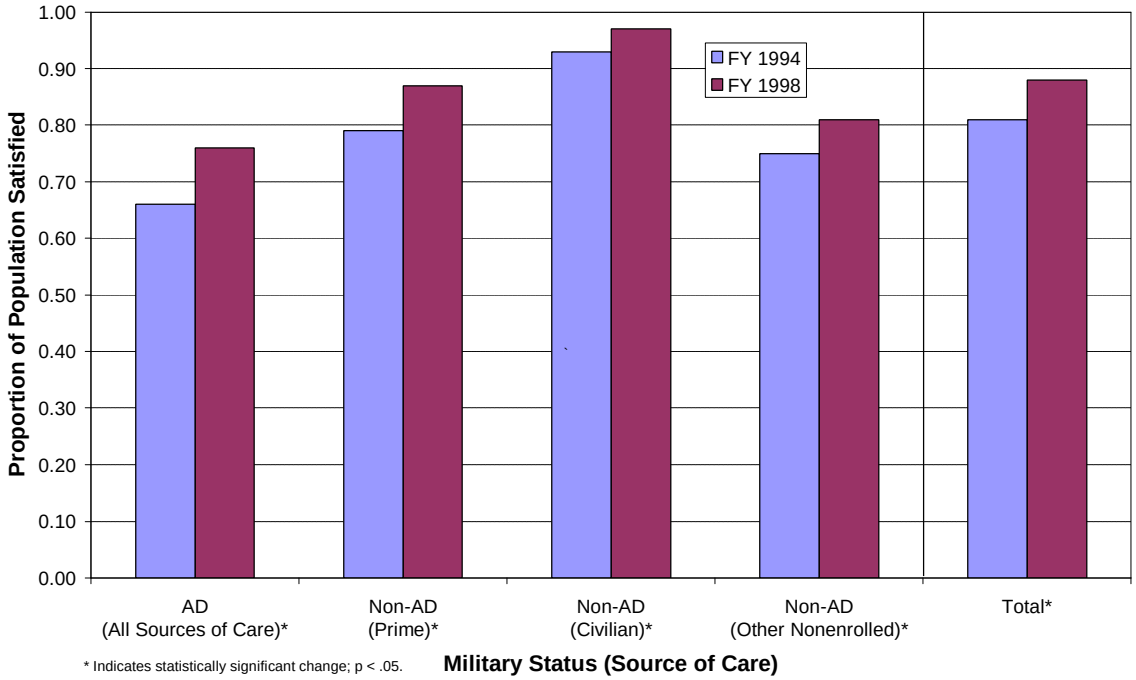


Figure 3-6. Change in Satisfaction With Overall Quality of Care—All Regions Combined

Table 3-17. Regional Changes in Perceived Overall Quality of Care (Percentage of Subpopulation Satisfied)

	Military Status / Source of Care									
	Active Duty		Non-Active-Duty						Total	
	All		Prime		Civilian		Other Nonenrolled		All	
Region	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
3	0.66	0.73*	0.79	0.85*	0.90	0.97*	0.74	0.85*	0.80	0.88*
4	0.67	0.77*	0.77	0.88*	0.94	0.97*	0.75	0.81	0.82	0.89*
6	0.67	0.74*	0.71	0.86*	0.96	0.97	0.70	0.76	0.79	0.86*
7/8	0.67	0.75*	0.79	0.86*	0.93	0.97*	0.75	0.81	0.81	0.87*
9	0.65	0.77*	0.86	0.89	0.95	0.96	0.84	0.89	0.83	0.88*
10	0.56	0.78*	0.83	0.89*	0.94	0.95	0.82	0.80	0.85	0.90*
11	0.67	0.80*	0.84	0.91*	0.94	0.97	0.76	0.77	0.83	0.89*
12	0.59	0.80*	0.81	0.90*	0.98	0.99	0.73	0.74	0.74	0.86*
All	0.66	0.76*	0.79	0.87*	0.93	0.97*	0.75	0.81*	0.81	0.88*

* Indicates statistically significant change over time ($p < .05$).

Table 3-18 shows the effects of TRICARE on various quality-of-care attributes. Improvements under TRICARE were observed for each aspect of quality. The familiar pattern of greater levels of satisfaction for those with civilian-only (versus military) sources of care is observed for these data. The pattern and levels of satisfaction with quality attributes exhibited by those using MTF space-available care (Other, not enrolled) and Prime enrollees are nearly identical (9-percentage-point average increase for each).

This is to be expected because these groups receive their health care mostly at the same facilities.

Table 3-18. Measures of Perceived Quality of Care—All Evaluated Regions Combined (Proportion of Subpopulation Satisfied with Attribute)

	Military Status / Source of Care									
	Active Duty		Non-Active-Duty						Total	
	All		Prime		Civilian Care Only		Other Nonenrolled		All	
Measure	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
Satisfied with ability to diagnose	0.63	0.73	0.76	0.83	0.91	0.94	0.72	0.82	0.78	0.85
Satisfied with admin staff courtesy	0.62	0.87	0.77	0.92	0.93	0.98	0.72	0.91	0.79	0.93
Satisfied with attention by provider	0.67	0.83	0.77	0.87	0.90	0.95	0.73	0.84	0.79	0.89
Satisfied with explanation of medical tests	0.66	0.76	0.77	0.85	0.90	0.94	0.76	0.81	0.80	0.86
Satisfied with explanation of procedures	0.69	0.77	0.78	0.85	0.91	0.95	0.76	0.80	0.81	0.87
Satisfied with health care resources	0.35	0.55	0.49	0.67	0.80	0.86	0.41	0.56	0.56	0.70
Satisfied with health care technical aspects	0.52	0.64	0.68	0.78	0.86	0.91	0.63	0.73	0.71	0.79
Satisfied with outcome of health care	0.68	0.76	0.79	0.85	0.92	0.95	0.76	0.83	0.81	0.87
Satisfied with overall quality of care	0.66	0.76	0.79	0.87	0.93	0.97	0.75	0.81	0.81	0.88
Satisfied with skill of provider	0.69	0.79	0.81	0.88	0.94	0.96	0.79	0.87	0.83	0.89
Satisfied with thoroughness of exam	0.66	0.77	0.76	0.85	0.92	0.95	0.73	0.82	0.79	0.87
Satisfied with thoroughness of treatment	0.66	0.75	0.80	0.85	0.93	0.96	0.76	0.83	0.81	0.87
Satisfied with time spent with provider	0.61	0.78	0.71	0.83	0.87	0.90	0.69	0.80	0.75	0.85

Note: All differences between 1994 and 1998 satisfaction levels were statistically significant ($p < .05$).

3.5 Comparisons of MHS Beneficiaries with the General Population

How do MHS beneficiaries' satisfaction with access to and quality of health care compare with that of the general population? Data from the National CAHPS[18] Benchmarking Database (NCBD) was used to contrast the populations.

[18] Consumer Assessment of Health Plans Studies.

The metrics used for some of the CAHPS measures was in the form of a rating scale. Respondents were asked to rate their health care on a scale from 0 to 10, where 0 equated to "worst health care," and 10 to "best health care." The most straightforward estimate of peoples' ratings is the mean rating. While it is possible to test for the statistical significance of the difference in mean ratings for the populations, it is difficult to interpret the meaning of the difference in terms of the scale metric. For example, on average DoD beneficiaries rated their health care 7.8, while the average rating in the general population was 8.4. Though this difference is statistically significant it has little practical meaning. As an aid for interpretation, the distribution of ratings in the two populations was used. That is, the proportion of people in a given population assigning a rating of 0, 1, 2, … , 10 was determined. These proportions were then compared across populations. Because the distribution of ratings was skewed toward the favorable end of the scale, most of the ratings were in the range of 5 to 10. The population with the greater mean rating also had a greater proportion of responses associated with ratings of 8, 9, and 10 (Figure 3-7). This gives rise to an alternate metric—the proportion of a particular subpopulation with ratings of 8 or greater. Estimates based on this metric are labeled "*ratings 8+*." Although this too is an arbitrary metric, it is somewhat closer to the "*proportion satisfied*" metric used elsewhere in the evaluation.

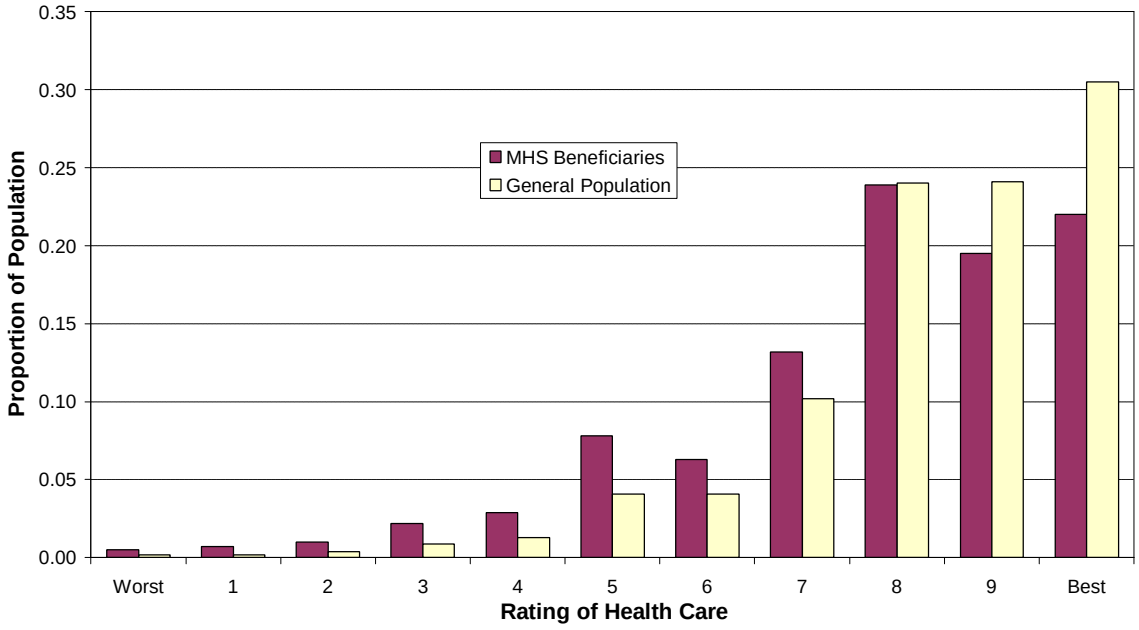


Figure 3-7. Health Care Rating Scale Distributions

Because population demographics are likely to affect satisfaction and other ratings, estimates of satisfaction in the general population were statistically adjusted to reflect MHS beneficiary demographics.[19] The general pattern of results, displayed in Table 3-19,

[19] This was done in a similar manner to the estimates made to the 1994 baseline population to reflect 1998 population demographics.

suggests that MHS beneficiaries are less satisfied with their health care than those in comparable health plans in the general population.[20]

Table 3-19. Comparison of TRICARE With the General Population

	Source of Care/Population									
	Military PCM versus HMO		Civilian PCM versus HMO		Civilian Only versus POS+PPO+ Indemnity		Other Nonenrolled versus POS		All	
Item (Scale)	TRI-CARE	NCBD	TRI-CARE	NCBD	TRI-CARE	NCBD	TRI-CARE	NCBD	TRI-CARE	NCBD
General Satisfaction:										
Rating of health insurance plan (11 pt.)	6.08	7.68*	6.89	7.71*	7.50	8.37*	6.85	7.90*	6.80	8.02*
Rating of health insurance plan (prop. 8+ rating)	0.32	0.61*	0.45	0.64*	0.60	0.75*	0.48	0.65*	0.46	0.68*
Access:										
Get routine appointment as soon as wanted (yes/no)	0.68	0.81*	0.73	0.83*	0.89	0.92	0.78	0.85	0.79	0.85*
See doctor for illnesses/injury as soon as wanted (0/1)	0.71	0.85*	0.76	0.88*	0.91	0.93	0.81	0.91*	0.81	0.88*
Able to get help by phone (yes/no)	0.74	0.86*	0.75	0.87*	0.93	0.92	0.82	0.92*	0.84	0.89*
Problem in getting referral (yes/no)	0.63	0.79*	0.69	0.78*	0.88	0.88	0.75	0.83	0.76	0.80*
Used ER past 12 months (yes/no)	0.31	0.13*	0.34	0.13*	0.23	0.12*	0.37	0.12*	0.29	0.12*
Quality of Care:										
Rating of health care (11 pt.)	7.05	8.05*	7.65	8.21*	8.42	8.78*	7.88	8.51*	7.77	8.46*
Rating of health care (prop. 8+ rating)	0.50	0.71*	0.63	0.75*	0.80	0.86*	0.67	0.80*	0.65	0.79*
Doctor listens carefully (0/1)	0.85	0.92*	0.86	0.92*	0.95	0.97	0.87	0.95*	0.90	0.94*
Rating of personal doctor	7.89	8.24*	8.25	8.25	8.46	8.68	8.34	8.34	8.24	8.46*
Rating of personal doctor (prop. 8+ rating)	0.66	0.73*	0.74	0.74	0.78	0.82	0.74	0.76	0.73	0.78*
Doctor respected comments	0.87	0.93*	0.89	0.93*	0.95	0.97	0.91	0.95	0.91	0.95*
Doctor spent enough time	0.80	0.88*	0.83	0.87*	0.90	0.94	0.84	0.91*	0.85	0.90*
Doctor explained things clearly	0.91	0.94*	0.92	0.94	0.96	0.97	0.92	0.96	0.93	0.95*
Doctor's staff helpful	0.83	0.90*	0.86	0.90*	0.96	0.96	0.90	0.93	0.90	0.92*
Doctor's staff courteous and respectful	0.90	0.95*	0.91	0.95*	0.98	0.98	0.95	0.97	0.94	0.96*
Rating of specialist	7.59	8.22*	7.89	8.35*	8.51	8.73	8.14	8.63	8.09	8.52*
Rating of specialist (prop. 8+ rating)	0.61	0.76*	0.69	0.77*	0.80	0.84	0.74	0.83	0.72	0.81*

* Indicates statistically significant difference between TRICARE and NCBD populations ($p < 0.05$).

[20] The two populations were grouped into 3 subpopulations corresponding to source of care or health plan. The groupings consisted of: (1) "HMO" (all TRICARE Prime enrollees) versus civilian HMOs; (2) nonenrolled MHS beneficiaries using civilian providers versus those in the general population with preferred provider organization (PPO), point of service (POS) and indemnity plans; and (3) nonenrolled MHS beneficiaries using TRICARE extra and MTF space-available care versus those in the general population with POS plans.

3.6 Satisfaction With Filing Medical Claims Under TRICARE

When seeking care outside the managed care network, a medical claim must be filed for reimbursement.[21] Use of CHAMPUS (TRICARE Standard) by those using civilian care-only dropped from 40 percent in 1994 to 33 percent in 1998, suggesting that fewer claims are now being filed.[22] About one-third of TRICARE Prime enrollees in 1998 also filed claims because they were referred to out-of-network providers. Using data from the NCBD, claims filing experience under TRICARE is compared to those with civilian plans in Table 3-20. The numbers shown for those in civilian plans (NCBD) are adjusted for demographic differences in the populations, and are based on the characteristics of MHS beneficiaries in 1998.

Table 3-20. Claims Processing Problems in 1998 (Excludes Regions 1, 2, and 5)

	Source of Care/Population									
	Military PCM versus HMO		Civilian PCM versus HMO		Civilian Only versus POS+PPO+ Indemnity		Other Nonenrolled versus POS		All	
Item	TRI-CARE	NCBD	TRI-CARE	NCBD	TRI-CARE	NCBD	TRI-CARE	NCBD	TRI-CARE	NCBD
Filed a claim	0.33	0.30	0.34	0.31	0.33	0.27	0.33	0.24	0.33	0.29*
Had a problem with claim processing	0.59	0.41*	0.53	0.42*	0.46	0.38	0.55	0.48	0.53	0.40*
Had a BIG problem with claim processing	0.23	0.13*	0.18	0.14	0.13	0.11	0.18	0.18	0.18	0.13*

* Indicates statistically significant difference between TRICARE and NCBD populations ($p < 0.05$).

The results suggest that overall there are fewer problems with claims under civilian plans. Within the MHS, those not enrolled using civilian providers had fewer problems with claims than either Prime enrollees or those using TRICARE Extra (Other, nonenrolled).

Some regional differences with claims filing experiences were observed (see Appendix F). These differences are partially the result of differences in procedures followed by the managed care contractor responsible for processing claims in a given region.[23]

[21] In principle, those enrolled in Prime and nonenrollees using the Extra network do not have to file claims. Participating providers in the Extra network and providers receiving referrals from PCMs of Prime enrollees are supposed to handle the necessary claims filing. Before TRICARE, filing a CHAMPUS claim was the responsibility of the patient.

[22] Information on the proportion of beneficiaries who had to file their own claims was not available from the survey data.

[23] CHAMPUS claims were handled differently in 1994 and 1998. In 1994, before TRICARE, claims were filed directly with a fiscal intermediary who processed claims for the beneficiary's state of residence. In 1998, each region under TRICARE has a contractor responsible for handling claims. Procedures can vary from region to region.

3.7 Retirees

There had been some concern, that with the advent of Prime, retirees who had depended on space-available care in the MTF, would be "squeezed out"—forcing them to either enroll in Prime or seek care from civilian sources (or Medicare for those 65 and over). Table 3-21 shows the proportions of retirees by age group and source of care in FY 1994 (pre-TRICARE) and in 1998.[24] Among those under 65, there was a shift out of space-available MTF care and civilian care into Prime. A similar shift is observed for those 65 and over. The 13 percent who indicated that they were in Senior Prime[25] were either enrolled, empanelled in special programs that give military physicians experience treating an elderly population, or may think that they are in Prime but are really using space-available military care.

Table 3-21. Retirees and Changes in Source of Care

	Source of Care					
	Prime		Civilian		Other Nonenrolled	
Age	FY94	FY98	FY94	FY98	FY94	FY98
Less than 65	–	0.36	0.52	0.48	0.48	0.16
Greater than 64	–	0.13	0.66	0.64	0.34	0.22

Note: Results exclude Regions 1, 2, and 5.

How satisfied are retirees with their health care? Table 3-22 shows changes in satisfaction levels of retirees from 1994 to 1998 for key indicators of access and quality. (Detailed data are shown in Appendix G.) Statistically significant increases in satisfaction were observed for nearly all measures over the period. An exception was for nonenrolled retires who mostly use space available MTF care. Their levels of satisfaction were noticeably lower—and have remained lower—than enrolled retirees and those getting their care outside the MHS (from civilian sources).

How does retiree satisfaction compare with that of active duty beneficiaries and their families (active-duty family members are represented as ADFM in the figures below), and the civilian population in general? Two key indicators are shown as the basis of comparison: access to routine appointments and rating of health care. Figures 3-8 and 3-9 provide estimates of the level of retiree satisfaction under their current plan (military system), and what it would be if they were in civilian plans (civilian system).

[24] The numbers sum to 100 percent within year and age group.

[25] Senior Prime enrollment began on 1 September 1998.

Table 3-22. Changes in Satisfaction Measures of Access and Quality for Retirees—All Evaluated Regions Combined

	Source of Care							
	Prime		Civilian Care		Other Nonenrolled		All	
Satisfaction Measure	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
ACCESS								
Availability:								
Access to care if needed	0.70	0.84*	0.91	0.94*	0.60	0.59	0.80	0.86*
Access to hospital care	0.79	0.88*	0.95	0.96*	0.69	0.69	0.86	0.91*
Access to emergency care	0.79	0.84*	0.92	0.95*	0.70	0.70	0.84	0.89*
Access to specialists	0.62	0.79*	0.90	0.93*	0.50	0.55	0.75	0.85*
Available information by phone	0.58	0.77*	0.82	0.88*	0.45	0.56*	0.69	0.81*
Availability of prescription services	0.86	0.88*	0.93	0.93	0.83	0.89*	0.89	0.91*
Process:								
Ease of making appointments	0.62	0.82*	0.94	0.96*	0.48	0.60*	0.77	0.87*
Time from making to having appointment	0.64	0.79*	0.90	0.91	0.53	0.63*	0.76	0.84*
Wait time in office	0.67	0.78*	0.85	0.85	0.61	0.67*	0.75	0.81*
QUALITY								
Overall quality of care	0.83	0.90*	0.94	0.97*	0.80	0.83	0.88	0.93*

* Indicates statistically significant change over time ($p < 0.05$).

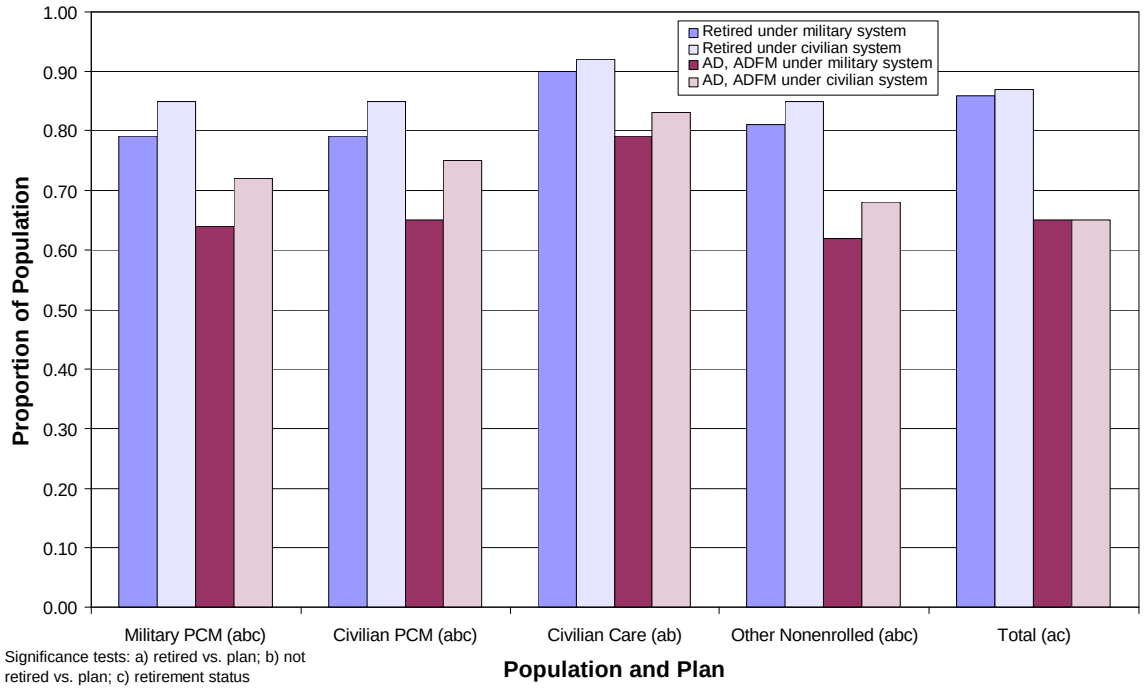


Figure 3-8. Satisfaction With Access to Routine Medical Appointments: Military Retirees versus General Population (Excludes Regions 1, 2, and 5)

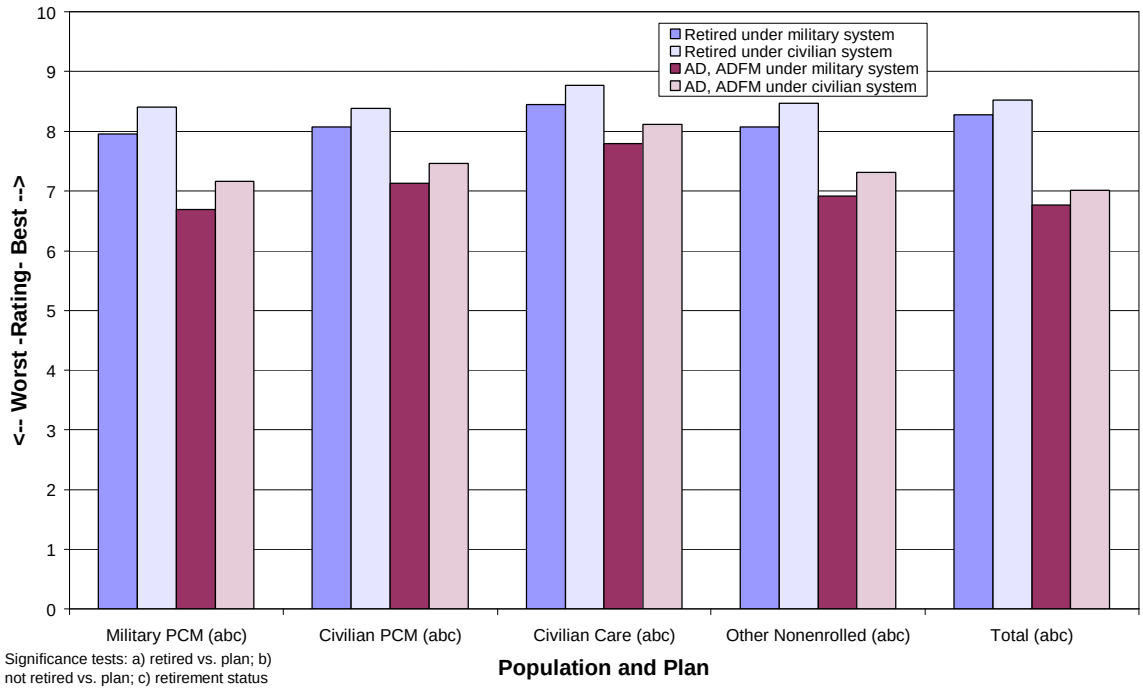


Figure 3-9. Military Retiree versus General Civilian Population Rating of Health Care

The general conclusion that can be drawn from these data is that retirees tend to be more satisfied with access to routine medical appointments (and other aspects of access) and rate their health care higher than do Active duty personnel and their family members. However, retired military and their family members, when compared to the general population, are less satisfied with access and do not rate their health care as highly as those in the general population.[26]

3.8 Effects of Region Maturity

The methodology adopted for this evaluation examines changes in measures of access and quality from a single baseline period (1994), before TRICARE inception, to 1998. This methodology is extended to examine trends in access and quality indicators.

Because initial enrollment dates were staggered across regions, regions will achieve a given level of maturity in different calendar years. Using a fixed baseline period of 1994 (necessitated by data limitations) will leave gaps in an annual trend line for certain regions. The exception is Region 11, for which there are four consecutive years of data, 1994 to 1998.

[26] Note that the comparisons between the retired military and general populations are adjusted for differences in demographics. Data labeled "under civilian system" are estimates of levels of satisfaction for the military population if they were under the civilian plan.

3.8.1 Region 11 Changes

Region 11 was the first TRICARE site and has been enrolling people in Prime since March 1995. The previous evaluations focused on this single region because it was the only one that had been operational long enough at the time with meaningful longitudinal data. The results of the earlier evaluations suggested that TRICARE had resulted in increased access and that quality of care was being maintained. A further look is now taken for evidence of a continued trend in access and quality of care in Region 11.

3.8.1.1 Access to Care

Figures 3-10 and 3-11 show 3-year trends[27] for beneficiary satisfaction with access to care when needed, and ease of making an appointment, respectively, for each of the defined subpopulations (Appendix H provides supporting data). The results show that levels of satisfaction continue to rise, as TRICARE matures. Levels of satisfaction with access for those with civilian sources of care were the highest—consistently above 90 percent. Satisfaction with access to Prime rose by more than 20 percentage points over the period, but it is still below that of access to civilian care.

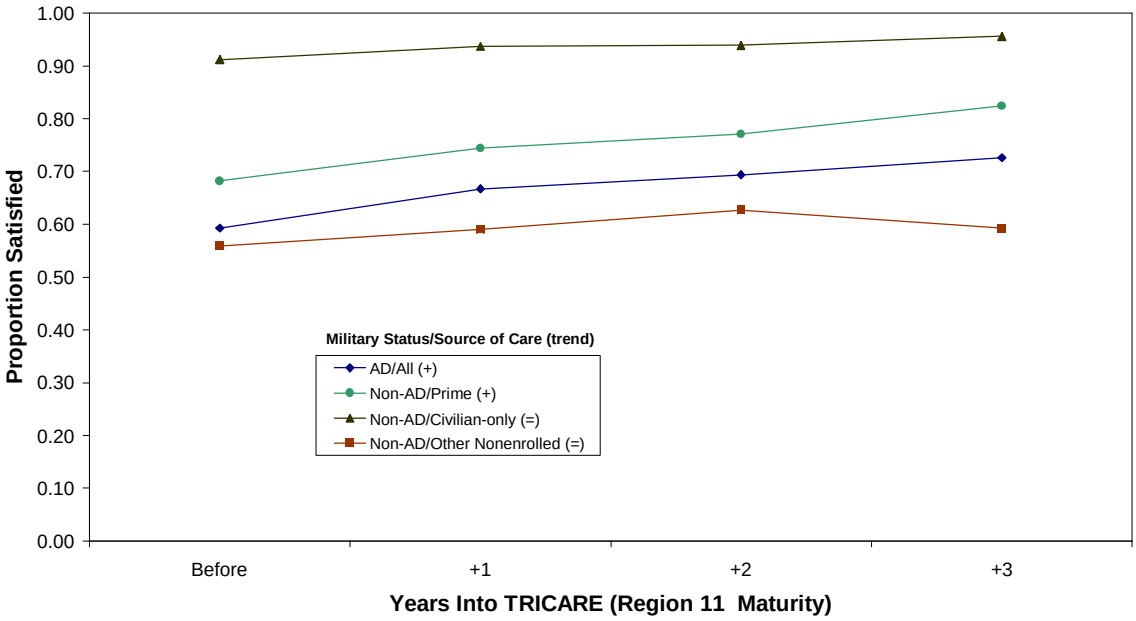


Figure 3-10. Trends in Satisfaction with Access to Care When Needed in Region 11

[27] Statistical significance of a linear trend ($p < 0.05$) is indicated by "+" if positive/rising, and "-" if negative/falling. An equal sign is used to indicate that year-to-year changes were not statistically significant.

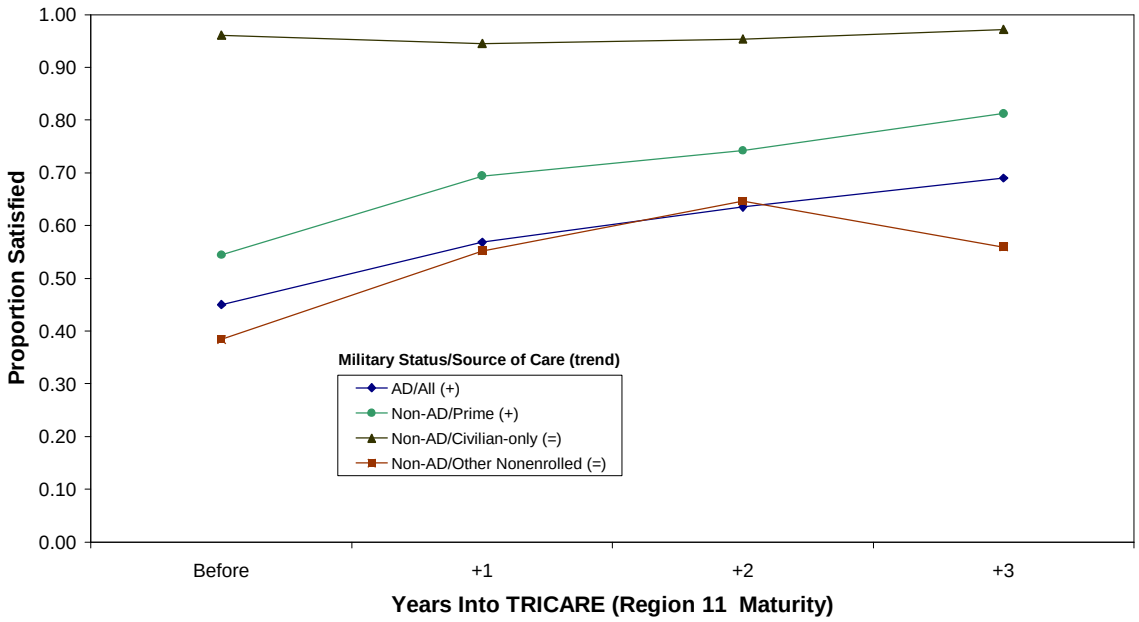


Figure 3-11. Trends in Satisfaction with Ease of Making an Appointment in Region 11

3.8.1.2 Quality of Care

Figure 3-12 shows the 3-year trends for satisfaction with quality of care in Region 11. The general trend (*total* group) suggests a gradually improving perception of quality of care. The levels of satisfaction with quality of care received at military facilities are approaching those received at civilian ones in Region 11.

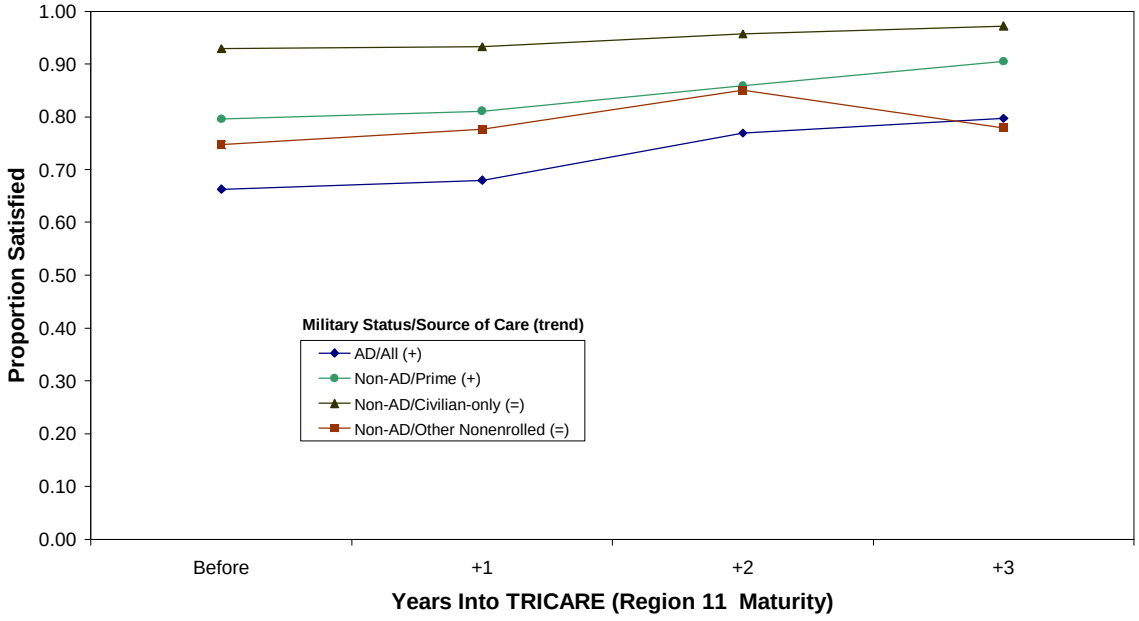


Figure 3-12. Trends In Satisfaction With Overall Quality Of Care In Region 11

3.8.2 Region Maturity

As TRICARE matures, will there be a leveling-off in the increase in access and quality measures that were observed from the baseline period to 1 year after implementation? The previous look at key indicators for Region 11 had shown a linear growth trend. Table 3-23 shows estimates of satisfaction of non-active-duty Prime enrollees over the 4 year period. The data are grouped by regions that began enrolling beneficiaries at about the same time.[28]

Table 3-23. Trends in Satisfaction with Access to Care If Needed for Non-Active-Duty Prime Enrollees (Proportion Population Satisfied)

	Year			
Regions	1994	1996	1997	1998
11	0.71	0.76	0.79	0.83
6, 9, 10, 12	0.68		0.76	0.79
3, 4, 7/8	0.64			0.80
	Maturity			
	Base (1994)	+1	+2	+3
Combined (All except 1, 2, and 5)	0.66	0.78	0.79	0.83

Each column of Table 3-23 corresponds to a year. The cell entries are the average proportion of non-active-duty enrollees satisfied with "access to care when needed" for the regions shown in the left-most column. Diagonal entries represent a particular year of TRICARE maturity. For instance, Region 11 in 1996, Regions 6, 9, 10, and 12 in 1997, and Regions 3, 4, and 8 in 1998 represent 1 year of maturity. Region 11 in 1997 and Regions 6, 9, 10, and 12 in 1998, represent 2 years of maturity. The last row of the table shows the averages of regions with 1, 2, and 3 years of maturity, respectively, as well as the baseline (0 years of maturity). The data shown in Table 3-23 suggest a positive trend between the baseline and 3 years into TRICARE.

The pattern of available data contributing to each of the levels of maturity is somewhat sparse. Note that only Region 11 has 3 years of maturity. It is only at 1 year of maturity that are all regions used. For these reasons findings about the effects of region maturity on the outcomes measured here are only suggestive.

The efficacy of using this method to measure region maturity rests on the assumption that year-to-year changes are the result of TRICARE. So-called "annual effects" and "regional effects" are assumed to net to zero. This assumption is virtually the same as made earlier that changes in access and quality from the 1994 baseline to the current evaluation year are caused only by TRICARE effects.

[28] Regions grouped together had been enrolling for about 12 months prior to survey administration. Because the date of survey administration did not necessarily correspond to the date of initial enrollments, a maturity of *1 year* could vary somewhat for the regions represented in a given row of the table. Perhaps a more accurate label for "1 year maturity" would be "maturity period one." However, the intervals between subsequent maturity periods correspond to survey administration intervals. These intervals were approximately 1 year.

Figures 3-13 and 3-14 show estimates of access and quality-of-care indicators and region maturity by source of health care. (Additional measures are shown in Appendix I.) Again, a positive trend is seen for each source-of-care group on both indicators.

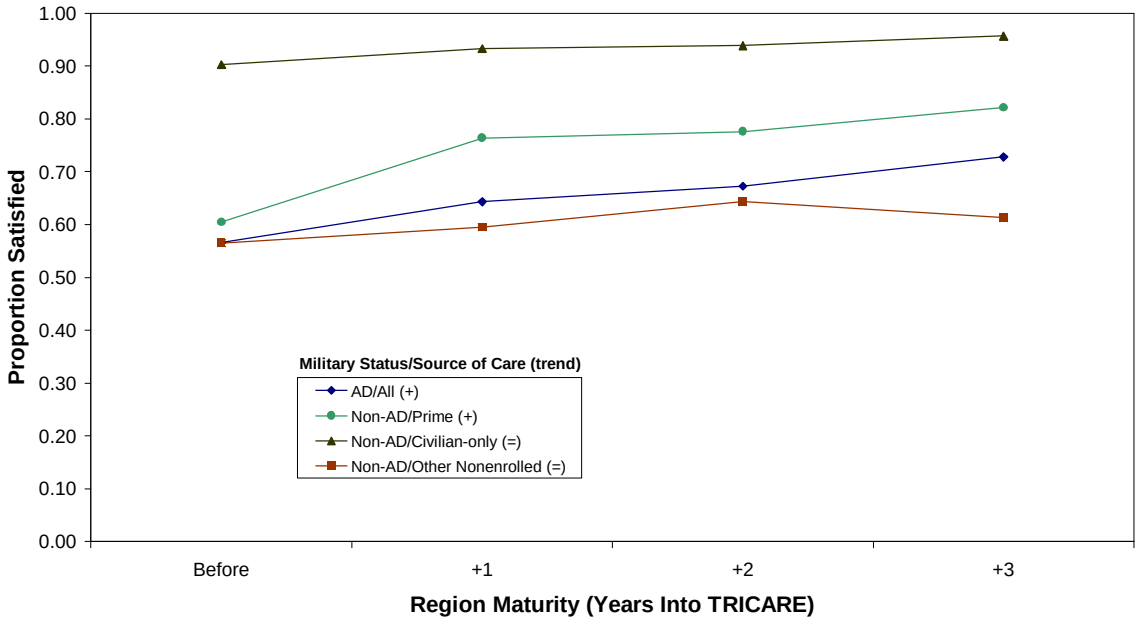


Figure 3-13. Trends in Satisfaction with Access to Care When Needed

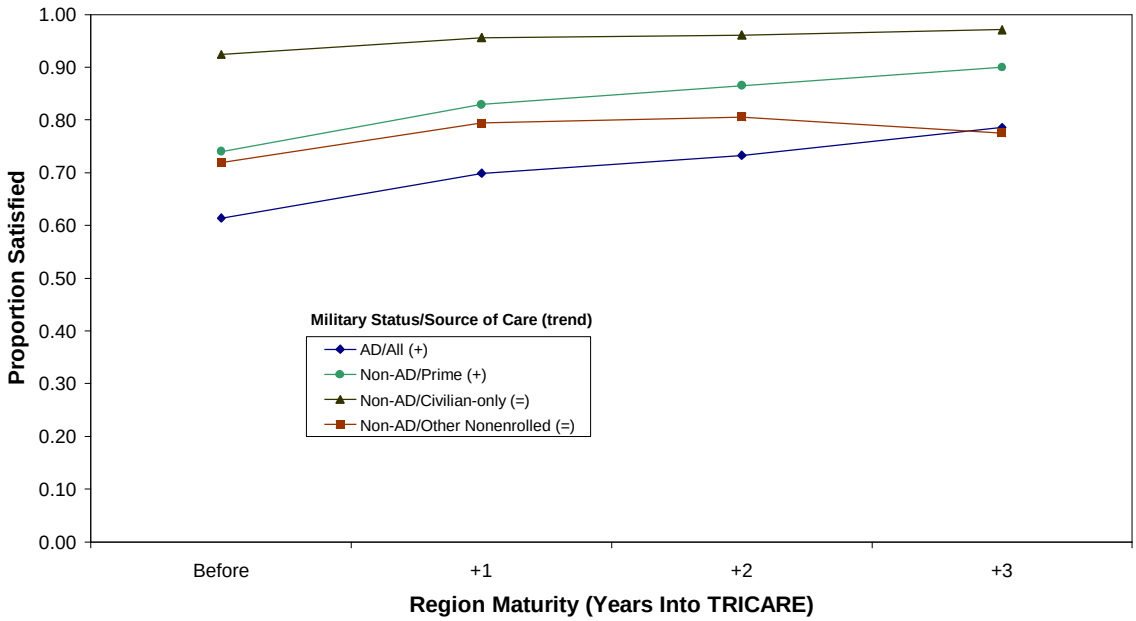


Figure 3-14. Trends in Satisfaction with Overall Quality of Care

3.9 Predictors of Satisfaction with Health Plan

What factors contribute to how well beneficiaries rate their health plans? The contributions of perceived access to care (including getting referrals to specialists and getting routine appointments), problems with claims processing, and quality of care as predictors of health plan rating are examined.[29] The 11-point rating scale was transformed to a binary metric for ease of interpreting the results. The "top-3" metric was again used. Those ratings above a 7, were given a value of 1, and those at or below 7 were given a value of 0. Therefore, the average value of this measure of health plan rating will be the proportion of beneficiaries in the "top-3". A logistic regression model was used to relate the predictors of the health plan rating for each subpopulation.

To assess the effect of claims processing problems, and the other independent variables, a given independent variable was alternately assigned a value of 0 and 1, and estimates of the transformed health plan rating were made. The difference in the average values of these estimates represents the marginal effect of the variable or condition. For example, it is estimated that 27 percent of active duty beneficiaries would be in the top 3 rating categories for their health plan under the condition "no problems with claims processing." Alternatively, this value falls to 13 percent when there are problems with claims processing. Thus, the marginal effect of claims processing on health plan rating is a change of 13 percentage points. The relative importance of each of the independent variables can then be determined by comparing their marginal effects.

The results shown in Table 3-24 indicate that *satisfaction with quality of care* and *having had a problem with claims processing* have the greatest impact on health plan rating. For those enrolled in Prime (including Active Duty personnel), satisfaction with quality of care was the more important of these two factors. Alternatively, problems with claims processing had the greatest effect on health plan rating for those with other sources of care. The relative importance of the other predictors varies with beneficiary health plan/source of care. (Note that for those in Prime, having an MTF PCM plays a relatively minor role in differentiating health plan rating once the other variables are accounted for.)

These results suggest that satisfaction with quality of care plays a dominant role in determining how well beneficiaries rate their health plan. The determinants of quality of care are examined next.

3.9.1 Components of Perceived Quality of Care

A statistical model was constructed to determine the relationship between the satisfaction with overall quality-of-care rating and several components or attributes of quality, as well as with measures of satisfaction with access to care.[30] Table 3-25 shows

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[29] Survey respondents rated their health plan on an 11-point scale, anchored by the descriptors "worst" (score of 0), and "best" (score of 10).

[30] An alternative model (not shown) was developed that included "outcome of health care" as a predictor of satisfaction with overall quality of care. This measure was the dominant component of overall satisfaction. However, since health outcomes may not be directly controllable by health care policy, this measure was excluded from further consideration.

the results for the total population (all sources of care). The estimated proportion that would be satisfied at the mean values of the components was 0.88. The estimated level of satisfaction with overall quality when there is dissatisfaction with the component is shown in the column labeled *"no"*). The estimated level of satisfaction with overall quality when there is satisfaction with the component is shown in the column labeled *"yes"*). The difference between the aforementioned values is the marginal effect of the component. The order of the components shown in the table is by the absolute size of marginal effect—or importance of the component in determining satisfaction with quality.

Table 3-24. Predictors of Satisfaction with Health Plan Rating in FY 1998 (Proportion in "Top 3")

Military Status (Care)	Prop. in "Top 3"	Predictor (x)	Predicted Plan Rating (Proportion in "Top 3") Predictor Value No	Yes	Marginal Effect
AD	0.24	Satisfied with overall quality of care	0.07	0.28*	0.21
	0.24	Problem with claim	0.27	0.13*	0.13
	0.24	Access to care when needed	0.16	0.27*	0.11
	0.24	Problem getting routine appointment	0.28	0.21*	0.07
	0.24	Problem getting referral	0.25	0.18*	0.07
Prime	0.44	Satisfied with overall quality of care	0.24	0.46*	0.22
	0.44	Access to care when needed	0.27	0.47*	0.21
	0.44	Problem with claim	0.47	0.28*	0.19
	0.44	Problem getting referral	0.47	0.30*	0.18
	0.44	Problem getting routine appointment	0.46	0.41*	0.05
	0.44	MTF PCM	0.41	0.45	0.04
Civilian Only	0.60	Problem with claim	0.65	0.31*	0.34
	0.60	Access to care when needed	0.30	0.61*	0.32
	0.60	Problem getting referral	0.61	0.41*	0.20
	0.60	Satisfied with overall quality of care	0.42	0.60*	0.18
	0.60	Problem getting routine appointment	0.62	0.54*	0.08
Other Nonenrolled	0.43	Problem with claim	0.46	0.30*	0.16
	0.43	Overall quality of care	0.32	0.46*	0.14
	0.43	Problem getting routine appointment	0.45	0.35*	0.10
	0.43	Access to care when needed	0.46	0.40	0.06
	0.43	Problem getting referral	0.41	0.44	0.04
Total	0.46	Problem with claim	0.50	0.26*	0.23
	0.46	Overall quality of care	0.28	0.47*	0.19
	0.46	Access to care when needed	0.48	0.33*	0.15
	0.46	Problem getting referral	0.33	0.48*	0.15
	0.46	Problem getting routine appointment	0.48	0.41*	0.08

* Indicates a statistically significant effect on plan rating ($p < 0.05$).

Table 3-25. Estimates of Marginal Contributions of Attributes of Quality and Access to Care with Overall Quality of Care (All Sources of Care)

Component (x)	Component Value		Marginal Effect
	No	Yes	
Satisfied with thoroughness of treatment	0.82	0.90	0.08*
Satisfied with explanation of procedures	0.84	0.89	0.06*
Satisfied with skill of provider	0.85	0.89	0.04*
Satisfied with access to specialist	0.86	0.89	0.03*
Satisfied with waiting time for appointment	0.86	0.89	0.02*
Satisfied with thoroughness of exam	0.86	0.88	0.02*
Satisfied with access to hospital care	0.86	0.88	0.02*
Satisfied with ability to diagnose	0.86	0.88	0.02*
Satisfied with availability of health care information by phone	0.87	0.88	0.01*
Satisfied with availability of prescription services	0.87	0.88	0.01*
Satisfied with access to care if needed	0.87	0.88	0.01*
Satisfied with access to emergency care	0.87	0.88	0.01
Satisfied with ease of making an appointment	0.87	0.88	0.01*
Satisfied with waiting time to see provider	0.87	0.88	0.01
Satisfied with explanation of medical tests	0.87	0.88	0.01
Satisfied with convenience of treatment location	0.87	0.88	0.00
Satisfied with convenience of hours	0.88	0.88	0.00

* Indicates statistically significant effect of component on satisfaction with overall quality of care ($p < 0.05$).

These results show that satisfaction with health care provider technical and interpersonal skills dominates satisfaction with overall quality of care. Components related to access to care (access to specialists and waiting time for a medical appointment) have secondary impact on perceived quality. It should be noted that levels of satisfaction with most of the components shown are already quite high—leaving little room for improvement. The exception is access to specialists.

Table 3-26 summarizes results by military status and source of care groups.[31] Satisfaction with provider skills dominates the results for all but those using only civilian care, where "thoroughness of treatment" is most important. Access plays a secondary role for Active duty personnel and those using MTF space-available care (other not enrolled).

3.10 Areas of Possible Concern

While the general pattern of results shows that TRICARE has made dramatic improvements in access to care, and that most quality-of-care goals are being met, this study has identified several problem areas. These are summarized below.

[31] Results are only shown for components having a marginal effect of at least 3 percentage points.

Table 3-26. Estimates of Marginal Contributions of Attributes of Quality and Access to Care with Overall Quality of Care by Military Status and Source of Care

Military Status (Care) Group	Group Mean	Component (x)	Component Value		Marginal Effect[a]
			No	Yes	
AD	0.72	Satisfied with skill of provider	0.63	0.76	0.13
		Satisfied with explanation of procedures	0.67	0.75	0.08
		Satisfied with access to specialist	0.70	0.76	0.06
		Satisfied with thoroughness of treatment	0.69	0.74	0.05
		Satisfied with ability to diagnose	0.69	0.74	0.05
		Satisfied with explanation of medical tests	0.70	0.74	0.04
		Satisfied with waiting time for appointment	0.71	0.74	0.04
		Satisfied with access to care if needed	0.71	0.74	0.03
Prime	0.86	Satisfied with skill of provider	0.82	0.89	0.07
		Satisfied with explanation of procedures	0.82	0.89	0.06
		Satisfied with thoroughness of treatment	0.83	0.89	0.05
		Satisfied with access to specialist	0.85	0.89	0.04
		Satisfied with ability to diagnose	0.85	0.88	0.03
Civilian Only	0.97	Satisfied with thoroughness of treatment	0.82	0.99	0.17
		Satisfied with explanation of procedures	0.93	0.98	0.05
Other Nonenrolled	0.79	Satisfied with skill of provider	0.70	0.81	0.11
		Satisfied with thoroughness of treatment	0.71	0.82	0.11
		Satisfied with explanation of procedures	0.72	0.82	0.10
		Satisfied with appointment gap	0.77	0.83	0.06
		Satisfied with access to hospital care	0.77	0.82	0.05

[a] All components shown had a statistically significant effect on satisfaction with overall quality of care ($p < 0.05$).

3.10.1 Satisfaction With Military versus Civilian Care

Levels of satisfaction with most aspects of access were shown to be markedly greater for MHS beneficiaries with a source of care outside the military system and for those in the general population. Why are those who use the MHS as a source of care less satisfied? Four characteristics of the group *not* using the military health care distinguish them from those who do.[32]

Those in the civilian-care group are demographically different. They are:

- Older,
- Less likely to be from a minority group (non-Caucasian, non-Hispanic),
- More likely to live out of catchment, and
- More likely to have private insurance.

[32] These demographics are accounted for (controlled) in comparisons of outcomes over time. However, at any one point in time, demographic differences between military status and source of care groups are as stated.

As in previous years, older people were found to have greater levels of satisfaction with their health care—regardless of the source of care. However, age alone does not account for the observed differences in satisfaction. Those living out of catchment do not have access to military care and have little choice but to use civilian sources. Having private insurance is a consequence of using civilian sources of care, not the reason for it.

Those, who in principle, could use military sources of care but do not, are also different in a more subtle way—they *chose* their civilian care health plan and chose *not* to use the military system. This "taste" for civilian care likely accounts for some of the differences in satisfaction. While it is possible to "adjust" the data and statistically predict the outcomes of a subpopulation on the basis of different demographics, it is not possible to account for the factors underlying the choice of the source of health care with the available data.

However, it was possible to identify attributes of a health care system that discriminate between those with military and civilian sources of care. Those with military sources of care:

- Had greater difficulty in making an appointment for routine care,
- Made more calls needed to make an appointment,
- Waited a longer time to get a medical appointment
- Had a less convenient treatment location,
- Took a longer time to get to their treatment location,
- Had poorer perceived access to emergency care,
- Had poorer perceived access to specialists,
- Had *better* perceived access to prescription services,
- Had greater problems with claims processing.

The 1997 evaluation of TRICARE found that those enrolled in Prime who were able to choose their own PCM had significantly greater levels of satisfaction with most aspects of their health care—even such things as how long it takes to get an appointment.[33] Initiatives were taken in FY1999 to let Prime enrollees choose their PCMs. That should result in increased satisfaction in the future.

3.10.2 Shortfalls in Meeting Quality-of-Care Goals

While most *Healthy People 2000* goals were being met, a few were not. Some of these shortfalls are described below.

3.10.2.1 Tobacco Use

The use of tobacco products (cigarettes and smokeless tobacco) is prevalent among the enlisted population and for pregnant women. Similar shortfalls had been observed in the previous evaluation. While not a mitigating circumstance, prevalence of the use of tobacco products by youth in the general population is also high.

[33] The 1998 survey did not ask about ability to choose one's provider.

While it may be difficult to achieve a reduction in the use of tobacco, providing counseling services is less problematical.

3.10.2.2 Pap Tests

As reported earlier in Table 3-7, the level of *annual* Pap tests dropped from 69 to 66 percent, over the period of analysis, for women in the overall DoD beneficiary population. This is somewhat mitigated by the FY1998 achievement of the *Healthy People 2000* goal of "Pap test in past 3 years." A similar phenomenon was observed in the FY 1997 evaluation.

Specific screening mechanisms tend to increase the chance of early detection and improve treatment outcomes. Therefore, it is in both the DoD's and the beneficiaries' best interests to use these screening mechanisms because they save lives and dollars.

3.10.3 Claims Processing

Having a problem with a claim is the primary cause of dissatisfaction with one's health plan. The rate of claim filing for MHS beneficiaries was both higher than that observed under civilian plans and in those serving the general population. At the same time, MHS beneficiaries tend to experience more problems per claim filed than the general population. This was especially true for those enrolled in Prime who expect less paperwork and associated problems.

3.11 What Went Right

Despite these few glitches, the net effect of TRICARE is continued improvement in access to care, as evidenced by increased satisfaction with:

- access to care,
- ease of making appointments,
- wait-times for getting an appointment,
- wait-times for seeing a doctor during an appointment,
- convenience of hours, and
- being able to see a provider of choice.

The greatest increases in satisfaction with these aspects of access to care generally occurred for those enrolled in the Prime option of TRICARE.

TRICARE has also resulted in increased satisfaction with overall quality of care for the population as a whole. Quality of care has mostly been maintained under TRICARE. Most of the quantifiable *Healthy People 2000* goals examined were met, or nearly met, for the population as a whole.

4. COST TO THE GOVERNMENT

The evaluation of TRICARE costs considered both the costs to the government and to covered beneficiaries. This chapter considers the effect of TRICARE on government costs; the next chapter considers the cost to covered beneficiaries. In both cases, actual TRICARE utilization and costs in FY 1998 were compared with the corresponding quantities in FY 1994. To make these quantities comparable, FY 1994 direct care and CHAMPUS costs were inflated to FY 1998 dollars, and both utilization and costs were adjusted to reflect the beneficiary composition in FY1998 as well as the effects of BRAC and other Service rightsizing initiatives. Throughout the remainder of this document, the latter estimates are referred to as the FY 1994 baseline. Also, the term "purchased care" is used to refer to both CHAMPUS in FY 1994 and to MCS contractor care in FY 1998.

4.1 Methods and Data Sources

4.1.1 Data Sources

The evaluation of government and beneficiary costs was based on data from several sources. To ensure adequate sample sizes, independent samples were drawn from the FY 1994 and FY 1998 Defense Enrollment Eligibility Reporting System (DEERS) databases so that both direct-care and purchased-care inpatient costs could be estimated with a desired level of precision. Appendix J provides a detailed description of the sampling considerations, sample sizes, and weighting procedures. Because inpatient care is the most infrequent health care service, sample sizes determined to estimate hospitalization rates and costs should also be sufficient to estimate outpatient and prescription utilization and costs.

Beneficiaries in the FY1998 sample were matched to the FY 1998 DEERS enrollment database to determine their Prime enrollment status (enrolled or nonenrolled), enrollment intervals, PCM type (military or civilian), and region of enrollment. In many cases, beneficiaries had two or more enrollment intervals, usually involving a move from one region to another, but sometimes involving a shift from a military to a civilian PCM or vice versa. For comparability with the FY 1998 sample, beneficiaries in the FY1994 sample were prospectively matched to the FY 1998 DEERS enrollment database and classified in the same manner as the FY 1998 sample, with the exception that some beneficiaries were not eligible for military health care in FY1998. The latter group of beneficiaries was included in the estimation of the baseline but excluded from the estimation of the TRICARE effect.

The health care experience of sampled beneficiaries was obtained by matching them to FY 1994 and FY 1998 purchased-care claims and Standard Inpatient Data Records (SIDRs—MTF hospitalization records). The purchased-care claims data were aggregated into inpatient, outpatient, and prescription episodes, with corresponding government and beneficiary out-of-pocket costs. For FY 1998, provider information on the claims records permitted utilization and costs to be classified further into Prime, Extra, and Standard options. Although the SIDR data did not indicate the enrollment status of beneficiaries

who had a hospital stay, MTF discharges could be classified as Prime or space-available by matching the discharge dates to the Prime enrollment file.

Figure 4-1 graphically depicts the data sources used in this evaluation and summarizes the information derived from each source.

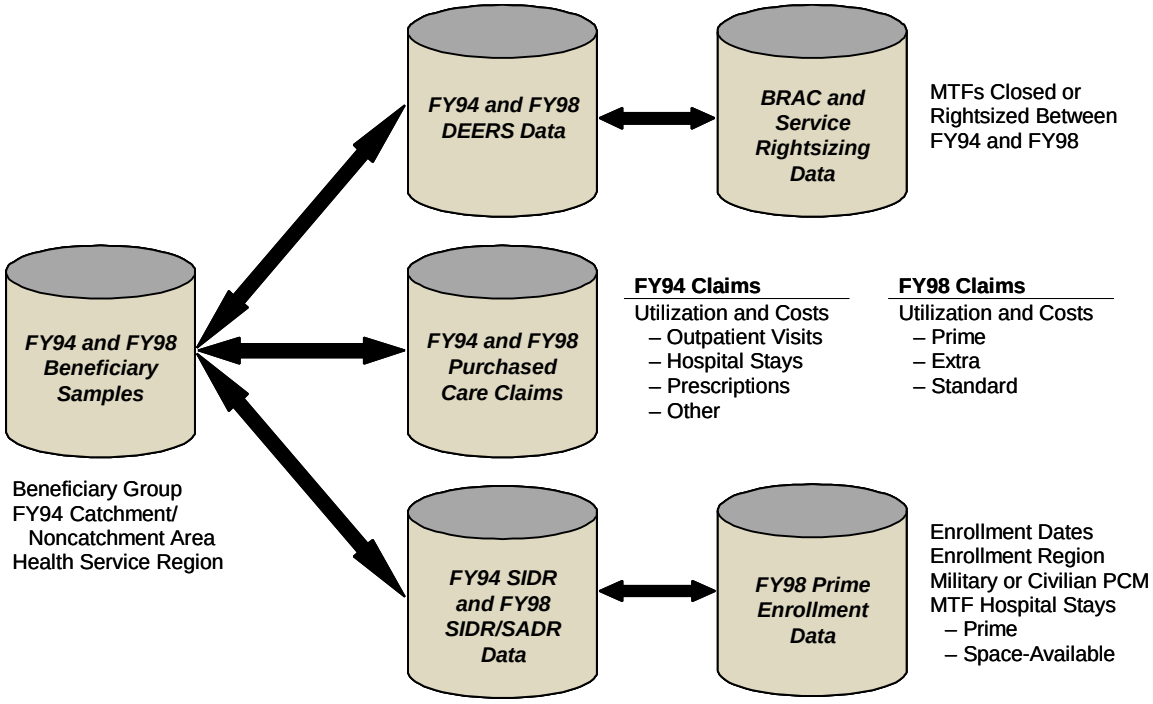

Figure 4-1. Sources of Data Used for Evaluation of TRICARE Costs

4.1.2 Purchased Care Data

The FY 1998 purchased-care claims files used in this evaluation were based on 20 months of data (i.e., claims submitted up to 8 months after the close of the fiscal year). According to the CHAMPUS Regulation (DoD 6010.8-R), all claims submitted for benefits must, with a few exceptions, be filed no later than 1 year after services are provided. Claims adjudications, often involving large sums of money, can further extend the time period before the claims files can be considered complete. To avoid having to wait much longer before processing the purchased-care claims, it was decided to estimate their completeness using 30-month CHAMPUS Medical Information System (CMIS) data available from TMA–Aurora. Separate completion factors were derived for inpatient, outpatient, and prescription services for every combination of Health Service Region, Service, and beneficiary category (active-duty family members, retirees, and retiree family members). The completion factors were then applied to the appropriate cost and utilization elements in FY1998 to estimate a full year of claims experience. A similar procedure was followed for FY 1994 claims data (even though those data are already complete) to correct for sampling error in estimating total utilization and costs.

The FY 1994 purchased-care costs were burdened with the costs of the Office of the Civilian Health and Medical Program of the Uniformed Services (OCHAMPUS) in

Colorado, plus the Fiscal Intermediary (FI) contractors who processed claims in each region. At a national level, the cost of these activities was 5.95percent relative to the direct payments from OCHAMPUS to medical providers.[34] The situation was different in FY 1998. The OCHAMPUS cost was still borne by the Defense Health Program through direct appropriation to TMA–Aurora (the successor to OCHAMPUS and the TRICARE Support Office), but the FI and certain other administrative costs migrated to the MCS contractors. The allocation of FY 1998 administrative costs is described later in this chapter.

4.1.3 Direct Care Data

MTFs record inpatient stays in the SIDR data. As with purchased care claims, the SIDR data remain incomplete until several months have elapsed beyond the end of the fiscal year. To adjust for incompleteness, the SIDR data were reconciled with data from the Medical Expense and Performance Reporting System (MEPRS), which were virtually complete 6 months after the close of FY 1998.

An additional adjustment was made to MTF inpatient utilization and costs to account for a change in the treatment of ambulatory (same-day) surgeries between FY 1994 and FY 1998. In FY 1994, all ambulatory surgeries were recorded on SIDRs along with other procedures requiring an overnight stay. However, as MTFs began shifting to the Ambulatory Data System (ADS) in FY 1996, ambulatory surgeries were recorded on Standard Ambulatory Data Records (SADRs), and corresponding costs were allocated to new MEPRS outpatient accounts. This posed a problem because FY 1994 and FY 1998 inpatient and outpatient utilization and costs were no longer comparable. Whereas all MTFs recorded ambulatory surgeries on SIDRs and MEPRS inpatient accounts in FY 1994, those MTFs using the ADS recorded them on SADRs and MEPRS outpatient accounts in FY 1998, and those not yet using the ADS recorded them as in FY 1994.

Two possible approaches were considered to correct this accounting anomaly. First, because ambulatory surgeries are now treated as outpatient procedures, all ambulatory surgeries identified on FY 1994 SIDRs could be moved to the outpatient side of the ledger. This would obviously require that the corresponding costs be moved as well. However, there was no separate visibility into ambulatory surgery costs in FY 1994 MEPRS. This left the only feasible approach of moving all ambulatory surgeries identified on FY 1998 SADRs back to the inpatient side of the ledger. Because new MEPRS accounts were created to identify ambulatory surgery costs for MTFs using the ADS, the corresponding costs could also be moved to the inpatient side.

Although the SIDR data contain individual patient identifiers, these identifiers are absent from the MTF outpatient data. Instead, MTF outpatient services are recorded only at an aggregate level in terms of workcenters and broad beneficiary categories. Therefore, the analysis of MTF outpatient services was necessarily conducted at a lesser degree of detail. In particular, the impact of TRICARE on MTF outpatient costs was estimated by simply comparing actual FY 1998 costs with FY 1994 costs adjusted for inflation, changes

[34] Office of the Civilian Health and Medical Program of the Uniformed Services, "CHAMPUS Chartbook of Statistics," OCHAMPUS Guide 5400.2-CB, December 1995, p. III-9.

in demographics, and BRAC and other Service rightsizing initiatives. It was not possible to partition the cost difference into components due to the Prime and space-available options.

The direct-care costs were developed from MEPRS, which records costs and workload by workcenter at each MTF. MEPRS classifies final operating costs into five accounts:

- A (Inpatient),
- B (Outpatient),
- C (Dental),
- F (Special Programs), and
- G (Readiness).

MEPRS also records intermediate operating costs in accounts D (Ancillary Services, e.g., pharmacy, pathology, and radiology) and E (Support Services, e.g., base operations and real property maintenance). However, these costs are fully allocated or "stepped down" to the five final operating accounts, so they need not be considered separately in this analysis.

In particular, most pharmacy costs are recorded in the three-digit account DAA (Pharmacy), and are stepped down to the final operating accounts. Some pharmacy costs are stepped down to the three-digit accounts FCC (CHAMPUS Beneficiary Support) and FCD (Support to Other Military Medical Activities). All non-active-duty beneficiaries have the option of obtaining a prescription from a civilian physician, and filling the prescription free of charge at an MTF pharmacy. The cost for these prescriptions is recorded in the DAA account and stepped down to the FCC account. Similarly, prescriptions may be written by a physician at one MTF but filled by the pharmacy at another MTF. The cost for these prescriptions is recorded in the DAA account and stepped down to the FCD account. This report considers the FCC and FCD costs along with those of the A and B accounts. Indeed, as will be seen later, 18 three-digit F-accounts are included in the analysis because they were judged to be potentially affected by TRICARE.

4.1.4 Utilization and Cost Models

Using the above data sources, models were developed to estimate the impact of Prime enrollment on utilization and costs. A further distinction was made between Prime enrollees with a military PCM and those with a civilian PCM. Prior to model estimation, some measures of beneficiary access were created to help predict utilization. Appendix K gives a detailed description of these measures.

Because individuals were observed over varying time periods, the potential for seasonal variation in utilization was also considered. For example, winter utilization tends to be higher than during the rest of the year. Consequently, annual utilization would probably be overestimated if utilization during the winter months were simply scaled by a factor of four. By analyzing the variation in monthly DoD-wide utilization and costs over the past several years, factors were derived that enabled utilization and costs observed over fractional MHS eligibility and Prime enrollment intervals to be scaled appropriately into annual equivalents.

Utilization of MHS services for any individual is measured in terms of counts—number of hospital stays, number of outpatient visits, and number of prescriptions. Models that take account of the discrete nature of count data, and the intervals over which

they are observed, were used for all the utilization analyses. For the purchased-care outpatient and prescription analyses, two-stage models were used. In the first stage, the probability that an episode occurred during the period of observation was estimated. In the second stage, the expected number of episodes, conditional on having at least one, was estimated. The models were then combined to produce an estimate of the expected utilization for each eligible beneficiary. For both the purchased care and MTF inpatient analyses, two-stage models were neither feasible nor necessary because very few beneficiaries had more than one hospital stay. Therefore, single-stage models were used to estimate the expected number of hospital stays.

Two-stage models were also used to estimate purchased-care unit costs (i.e., cost per unit of service—hospital stays, outpatient visits, and prescriptions). In the first stage, the probability of a positive government cost was estimated. Government costs can be zero when a beneficiary has not met his or her deductible or has private insurance that covers the full CHAMPUS allowed amount. In the second stage, the unit cost was estimated conditional on its being positive. To obtain an estimate of total cost, the utilization and unit-cost estimates for each beneficiary were multiplied, weighted (using the sampling weights described in Appendix J), and summed across all eligible beneficiaries.

A single-stage model was used to estimate MTF inpatient costs. Because MTFs do not bill beneficiaries for a hospital stay, the SIDRs do not contain any information on cost. Rather, they contain a measure of relative resource consumption for each discharge. This measure, called a Relative Weighted Product (RWP), is computed by applying what is referred to as the TRICARE Grouper[35] and associated weights that reflect the resources expended relative to the nationwide average. It is normalized so that a procedure that consumes the nationwide average amount of resources receives an RWP of 1.0.

To estimate the cost of a discharge, it was necessary to convert the associated RWP to dollars. The conversion was complicated by the fact that some MTFs recorded ambulatory surgeries on SADRs in FY 1998. Ambulatory surgeries reported on SADRs (which are intended to report outpatient procedures) do not contain an RWP field; therefore, a method was needed to assign an RWP value to each ambulatory surgery to make it comparable with ambulatory surgeries recorded on SIDRs. The assignment was accomplished by applying the TRICARE Grouper to the diagnosis and treatment codes recorded on the SADRs. However, because the SADRs are designed for outpatient procedures, they use different treatment codes than the SIDRs, which are designed for inpatient procedures. Therefore, the SADR treatment codes had to first be converted to the SIDR coding scheme before the TRICARE Grouper could be applied. Commercially available software (*CodeBreaker*, produced by Info-X Incorporated, includes a CPT to ICD-9 crosswalk) was used for this purpose.

The cost of a discharge was computed by multiplying each RWP by the average cost per RWP. Total inpatient and ambulatory surgery costs were obtained from MEPRS. However, MEPRS records only total discharges and bed-days, not RWPs. Consequently, total RWPs were obtained from SIDRs and scaled to the total number of discharges

[35] Produced by 3M Health Information Systems, the TRICARE Grouper takes account of the length of stay, diagnoses, treatments, complications, and comorbidities associated with a hospitalization to assign procedures to Diagnosis Related Groups (DRGs). Version number 15, applicable to FY 1998, was used for this analysis.

recorded in MEPRS (the scale factor for most MTFs was slightly over 1.0). Because the SIDRs record the discharging MTF, it was possible to apply an MTF-specific cost factor to each RWP. Once the cost of each discharge was computed in this manner, a unit cost regression model was estimated in a manner similar to the second stage of the purchased-care cost models.

As previously noted, MTF outpatient services are recorded only at an aggregate level in terms of workcenters and broad beneficiary categories. Although some ADS data were available in FY1998, no such individual patient-level accounting system was in place during FY 1994. The evaluation of MTF outpatient costs was therefore done on an aggregate level, without recourse to statistical models to estimate the FY 1994 baseline. Furthermore, no models were developed for MTF prescription costs because they are already allocated to the MEPRS inpatient and outpatient accounts.

4.1.5 Summary of Findings

Many of the tables and figures in this section display results in terms of the enrollment status of military health care beneficiaries. Considerations of space and clarity of exposition preclude displaying the information in greater detail. The displays can better be put in context, however, by knowing something about the composition of beneficiaries within and among enrollment status (i.e., enrolled with a military PCM, enrolled with a civilian PCM, or nonenrolled). Table 4-1 shows the distribution of beneficiaries by enrollment status, beneficiary group, and location (catchment area or noncatchment area). Beneficiaries are broken out by these characteristics because they are probably the most influential in determining utilization patterns.

Table 4-1. Distribution of Beneficiary Population by Enrollment Status, Beneficiary Group, and Location

Enrollment Status	Beneficiary Group	Location	End FY 1998 Population Size	Overall Percent	Percent Within Enrollment Group
Military PCM	Active Duty	Catchment	726,219	14.1	85.1
Military PCM	Active Duty	Noncatchment	126,924	2.5	14.9
Military PCM	Active-Duty Family Members	Catchment	717,455	14.0	62.0
Military PCM	Active-Duty Family Members	Noncatchment	78,992	1.5	6.8
Military PCM	Retirees<65 and Family Members	Catchment	319,847	6.2	27.6
Military PCM	Retirees<65 and Family Members	Noncatchment	40,837	0.8	3.5
Civilian PCM	Active-Duty Family Members	Catchment	69,946	1.4	20.5
Civilian PCM	Active-Duty Family Members	Noncatchment	83,106	1.6	24.3
Civilian PCM	Retirees<65 and Family Members	Catchment	84,036	1.6	24.6
Civilian PCM	Retirees<65 and Family Members	Noncatchment	104,675	2.0	30.6
Nonenrolled	Active-Duty Family Members	Catchment	242,683	4.7	13.1
Nonenrolled	Active-Duty Family Members	Noncatchment	129,883	2.5	7.0
Nonenrolled	Retirees<65 and Family Members	Catchment	753,676	14.7	40.5
Nonenrolled	Retirees<65 and Family Members	Noncatchment	732,483	14.3	39.4
Ineligible	Retirees≥65 and Family Members	Catchment	452,213	8.8	48.9
Ineligible	Retirees≥65 and Family Members	Noncatchment	472,284	9.2	51.1

A brief summary of the findings from the various models is presented below. The results are presented for all TRICARE regions combined. However, as the reader will note in Appendix L, which presents more detailed findings by region, the effect of TRICARE on utilization and costs varies widely from region to region. The combined results displayed in this chapter are therefore representative of the TRICARE program as a whole but obscure major differences across regions. Therefore, the results in this chapter cannot be extended to any of the regions not considered in this year's evaluation (Regions 1, 2, and 5). Because the sample sizes in both the baseline and TRICARE years are so large, nearly all the differences in utilization and cost are statistically significant.

In all the tables and figures to follow, the FY 1994 baseline was calculated by applying the FY 1994 models to the FY 1998 population so that the baseline represents an estimate of what would have happened in FY 1998 without TRICARE. Of course, without a control group, any inferences on what would have happened without TRICARE are incomplete. For example, utilization and costs could have been influenced by capitated funding, trends in the standard of care, or other unidentified reasons not related to TRICARE. Known changes explicitly controlled for by the statistical models are inflation, the effects of BRAC and other Service rightsizing initiatives, changes in the unemployment rate (which may affect private insurance coverage) and the HMO penetration rate (which may affect purchased-care utilization by nonenrollees), changes in MTF accounting practices, and changes in the beneficiary composition and size.

The reader may be tempted to compare the results in this report with the FY 1997 results reported last year.[36] The comparisons should be made with caution, however. First, there is an additional region (TRICARE Central) in the mix. Second, and probably more important, there was almost a 30-percent increase in Prime enrollment from FY 1997 to FY 1998, excluding active-duty members. Consequently, some beneficiaries who were in the nonenrolled population subset in FY 1997 migrated to the enrolled population subset in FY 1998. The mix of beneficiaries (in terms of utilization patterns) within each enrollment group may therefore be different from what it was in FY1997.

4.1.5.1 Purchased Care Outpatient Utilization and Costs

Figure 4-2 compares the average annual purchased-care outpatient utilization per beneficiary by enrollment type and beneficiary status in the FY1994 baseline with the FY 1998 TRICARE experience. Purchased care outpatient utilization was measured as the number of visits per eligible beneficiary. With presumably improved access to care at MTFs, beneficiaries enrolled with a military PCM can be expected to be treated more often at the MTF and referred to the network for specialty care only when necessary. The drop of nearly 20 percent in outpatient utilization by beneficiaries enrolled with a military PCM (active-duty family members and retirees combined) is consistent with that hypothesis. On the other hand, beneficiaries enrolled with a civilian PCM show a 59-percent increase in outpatient utilization, which can be partly explained by lower beneficiary cost shares (lower out-of-pocket costs tend to increase utilization) and a

[36] Peter H. Stoloff, Philip M. Lurie, Lawrence Goldberg, and Matthew S. Goldberg, *Evaluation of the TRICARE Program: FY 1999 Report to Congress*, 31 October 1999.

greater emphasis on preventive care under Prime.[37] The increase in outpatient utilization by beneficiaries with a civilian PCM is consistent with what occurs in commercial managed-care settings (i.e., outpatient utilization increases in response to tightening controls on inpatient utilization).

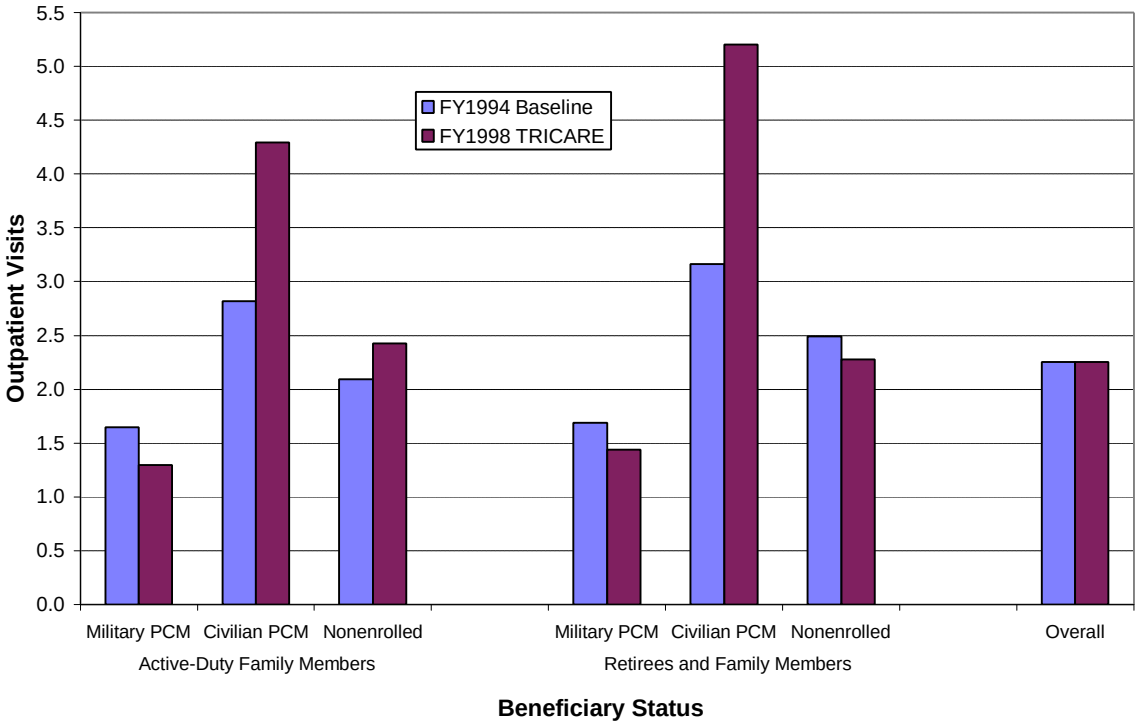

Figure 4-2. Average Annual Purchased-Care Outpatient Utilization per Beneficiary

Overall, TRICARE had a negligible impact on the outpatient utilization of nonenrollees (an decrease of 4 percent), but there was a marked difference between the impact on active-duty family members and retirees and family members. Active-duty family members experienced a 16-percent increase in utilization whereas retirees and family members experienced a 9-percent decrease (there was an overall decrease in utilization because most nonenrolled beneficiaries are retirees). An increase in purchased-care outpatient utilization by nonenrolled active-duty family members might be expected because some beneficiaries who previously relied primarily on the direct-care system for their care have undoubtedly been "squeezed out" of the MTF under TRICARE and must now rely more heavily on purchased care. Further, according to the FY 1998 Health Care Survey of DoD Beneficiaries, a relatively small percentage of active-duty family members have private health insurance coverage, so they have few options for care other than TRICARE Standard or Extra. On the other hand, nonenrolled retirees may be picking up private insurance (they are a more affluent group than active-duty family members and many have insurance provided by civilian employers) to cover expected increases in civilian sector costs. To examine this possibility, a question was included in

[37] The same emphasis on preventive care is also present for enrollees with a military PCM but is reflected in outpatient utilization and costs at the MTFs rather than at civilian providers.

the FY 1998 Health Care Survey of DoD Beneficiaries, asking whether TRICARE had any effect on the respondent's decision to be covered by private insurance. Table M-2 of Appendix M shows the results, broken out by Health Service Region, beneficiary group, and enrollment status. To summarize, retirees and family members, who constitute almost 80 percent of nonenrollees, had a net increase of 14 percent in private insurance coverage from FY 1994 to FY 1998 because of TRICARE. That fact, together with nationwide statistics showing a trend away from standard fee-for-service plans and toward more HMOs and PPOs[38] (resulting in lower copayments that reduce the likelihood of filing a network claim), likely explains most of the drop in outpatient utilization among nonenrolled retirees.

Figure 4-3 shows the impact of TRICARE on the average purchased-care outpatient cost per beneficiary. FY 1994 costs were inflated by the Medicare Economic Index (4-year cumulative inflation of 9.2 percent) because that index is one of the factors used by TMA–Aurora in setting its maximum allowable charges. The general trends in cost are similar to those observed for outpatient utilization, but the magnitudes are quite different. First, although utilization by beneficiaries enrolled with a military PCM declined by 20 percent, corresponding costs declined by only 3 percent. This phenomenon occurs because beneficiaries are not usually referred to the network unless they need specialty care, which tends to be more costly. Second, the cost for beneficiaries enrolled with a civilian PCM increased by 73 percent, compared with 59 percent for utilization. This pattern is likely caused by beneficiaries dropping their private insurance coverage (see Table M-2 of Appendix M for evidence of this) because of anticipated reductions in their out-of-pocket costs upon enrollment in Prime, thereby increasing the cost to the government. Finally, the cost for nonenrollees declined by almost 30 percent, compared with a slight decrease in utilization. The disproportionate drop results from an increase in nonenrolled retirees with private insurance coverage (which reduces the amount the government needs to cover) and savings due to discounted provider fees when beneficiaries use the Extra option. Overall, outpatient costs decreased by 9 percent.

The total cost can be expressed as the product of the total number of visits and the average cost per visit. The average cost per visit can be expected to increase for Prime enrollees because the government is picking up a greater share of the cost. For nonenrollees, the average cost per visit should decline because of increased third-party collections and discounted provider fees when beneficiaries use the Extra option. The estimated trends in the cost per visit are consistent with these expectations. For enrollees with a military PCM, the cost per visit increased by 23 percent; for enrollees with a civilian PCM, it increased by only 12 percent. On the other hand, the government experienced a 31-percent drop in the cost per visit for nonenrollees. Overall, the average cost per visit declined by 12 percent.

[38] From 1994 to 1998, civilian HMO enrollment increased from 25 percent to 33 percent, while PPO utilization increased from 30 percent to 40 percent. The source is Bureau of Labor Statistics, United States Department of Labor, *News*, January 7, 1999, Table 5, p. 9.

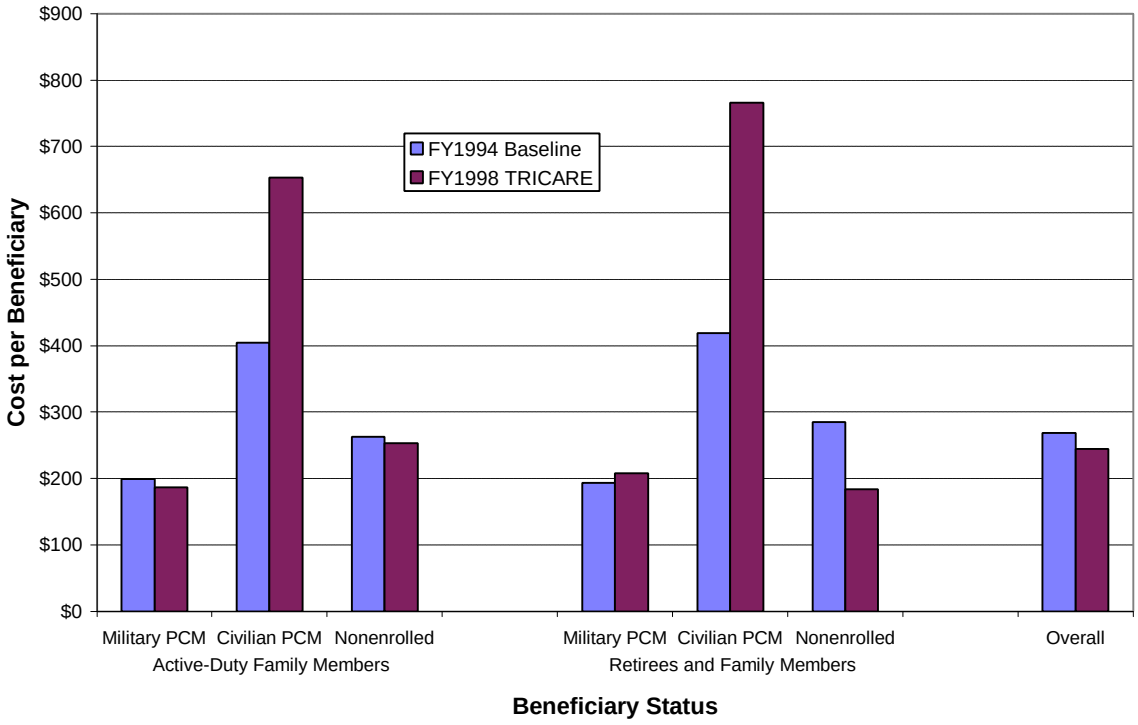

Figure 4-3. Average Purchased-Care Outpatient Cost per Beneficiary

4.1.5.2 Purchased Care Inpatient Utilization and Costs

In theory, managed care programs apply utilization management (UM) initiatives to reduce the incidence of unneeded hospitalizations. Utilization management includes prospective reviews by physicians, discharge planning, disease management programs, demand management programs, and other techniques to exercise clinical oversight. If a hospitalization is deemed necessary, managed care programs additionally apply quality management to reduce the length of stay without compromising the health of the patient. Therefore, much of the savings realized under TRICARE is expected to come from containing the costs of expensive inpatient care. Some of the potential cost savings could come from the UM initiatives just described; the remainder could come from discounts that the MCS contractor negotiates with civilian network hospitals and physicians.

Figure 4-4 compares the average annual purchased-care inpatient utilization per beneficiary by enrollment type in the FY1994 baseline with the FY 1998 TRICARE experience. Purchased-care inpatient utilization was measured as the number of hospital discharges per 1,000 eligible beneficiaries. The effect of TRICARE on purchased-care inpatient utilization is similar to that for outpatient utilization for each beneficiary group except retirees and family members with a military PCM. Active-duty family members with a military PCM show a decline of almost 17 percent in their purchased-care inpatient utilization, consistent with the application of UM at MTFs including referrals to the network only when needed. Retirees and family members with a military PCM, on the other hand, exhibit nearly a 35-percent increase in purchased-care inpatient utilization.

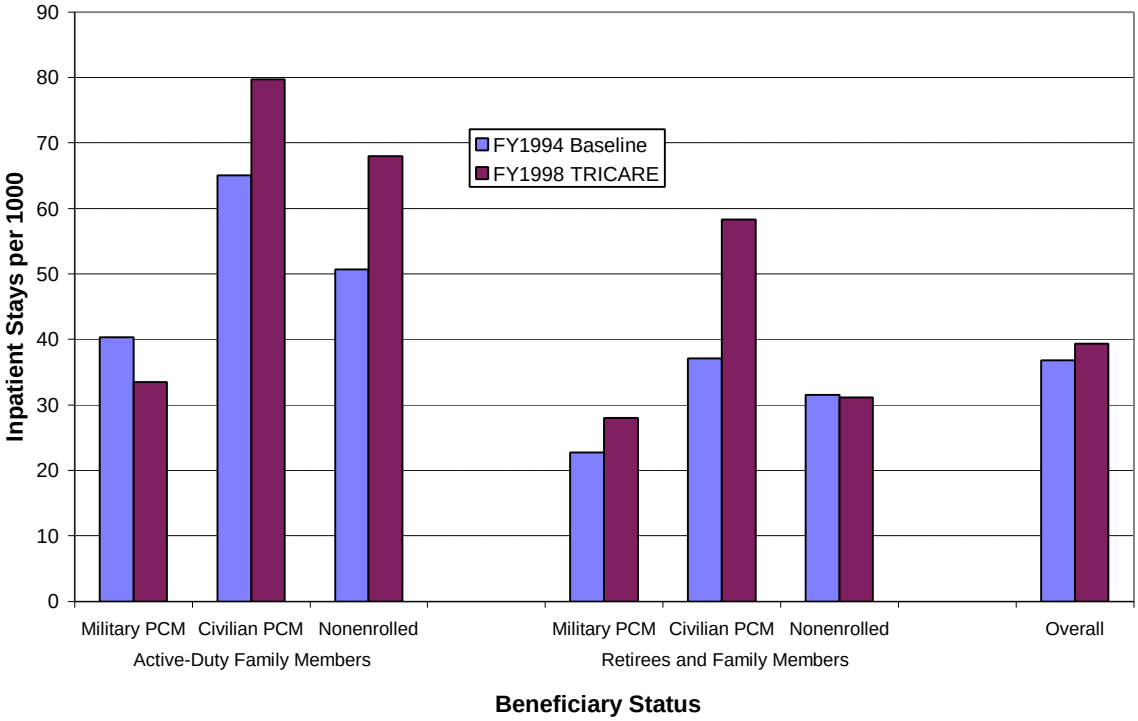

Figure 4-4. Average Annual Purchased-Care Inpatient Utilization per Beneficiary

Beneficiaries enrolled with a civilian PCM show a 34-percent increase in inpatient utilization, with the increase for retirees (56 percent) much higher than for active-duty family members (10 percent). The reason for the increase is related to that for the parallel increase in outpatient utilization (i.e., reduced beneficiary cost shares and improved preventive benefits under Prime cause beneficiaries to increase their utilization of outpatient services, thereby increasing their chances of having an illness detected that requires hospitalization).

Nonenrolled active-duty family members also experienced an increase in inpatient utilization in FY 1998 (42 percent) almost identical in magnitude to the increase in their outpatient utilization. The reasons for this are unclear as a decrease might have been expected because of increased private insurance coverage and a requirement for pre-authorization of inpatient mental health services that became effective in FY1997. On the other hand, the savings offered under the Extra option may have induced beneficiaries to increase their utilization somewhat. Overall, the purchased-care inpatient hospitalization rate increased by 5 percent.

If TRICARE was successful in implementing control over the delivery process, one might expect a reduction in both the length and variation of a hospital stay. Because TRICARE is likely to affect the case-mix of procedures performed in the hospital, it is necessary to hold the case mix constant when comparing the average length of stay before and after TRICARE. This was done by computing the average length of stay

within the same Diagnosis Related Groups (DRGs)[39] and applying the FY 1998 case mix (i.e., the percentage of procedures within each DRG) to both years. From FY 1994 to FY 1998, the case-mix-adjusted average length of stay decreased from 6.3 to 5.3 days (a 16-percent decrease). However, the standard deviation of length of stay remained essentially the same (from 13.0 days in FY1994 to 13.2 days in FY 1998).

Figure 4-5 shows the effect of TRICARE on purchased-care inpatient costs. Purchased-care inpatient costs include both institutional and professional services charges. FY1994 institutional costs were inflated by the HCFA Hospital Input Price Index (11.3 percent) and professional services costs were inflated by the Medicare Economic Index (9.2 percent). Government costs were almost 10 percent lower for enrollees with a military PCM but substantially higher for enrollees with a civilian PCM (31 percent higher for active-duty family members and 45 percent higher for retirees). Again, the largest drop in cost (36 percent) is for nonenrollees because of their increased reliance on private insurance and because of discounted provider fees when beneficiaries choose the Extra option. The overall drop in purchased-care inpatient costs was 12 percent.

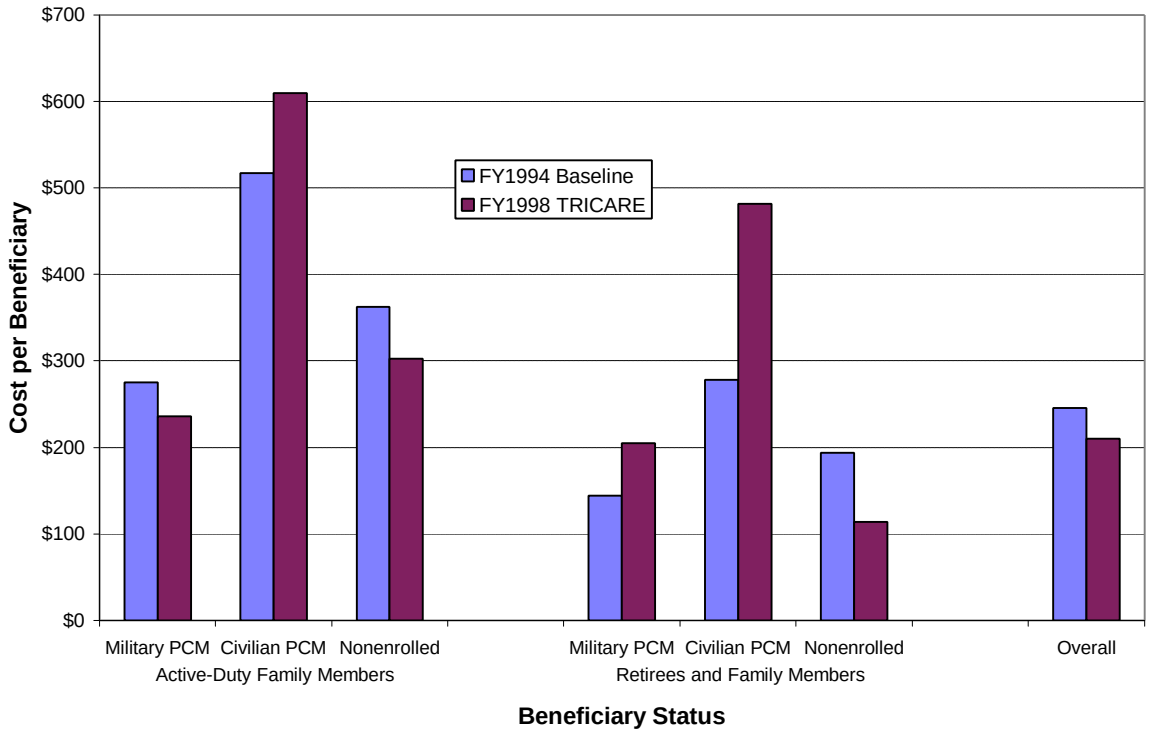

Figure 4-5. Average Purchased-Care Inpatient Cost per Beneficiary

[39] DRG is a patient classification system that relates demographic, diagnostic, and therapeutic characteristics of patients to the length of inpatient stays and amount of resources consumed. It provides a framework for specifying hospital case mix and identifies classifications of illnesses and injuries for which payment is made under prospective pricing programs.

There was a slight increase (4 percent) in the average cost per stay for beneficiaries enrolled with a military PCM. Although the average length of stay declined from 5.6 to 4.7 days for that group of beneficiaries, the resource consumption per stay increased, as evidenced by an increase in the average RWP from 0.92 to 1.02. The likely reason for the increased resource consumption is that beneficiaries with a military PCM are hospitalized in civilian facilities only if the procedure that is needed cannot be performed in the MTF. These procedures tend to be more complex and costly than the "typical" procedure performed in a civilian hospital. The average cost per stay declined by 11 percent for beneficiaries with a civilian PCM and by 42 percent for nonenrollees, again reflecting the higher level of private insurance coverage by the latter group of beneficiaries. Overall, the average cost per stay declined by 26 percent.

4.1.5.3 Purchased Care Prescription Utilization and Costs

Figure 4-6 presents a comparison of average annual purchased-care prescription utilization per beneficiary. Prescriptions include all initial and refill prescriptions filed on purchased-care claims or filled at network pharmacies (including regional mail-order pharmacy services but excluding NMOP) but are, by their nature, difficult to quantify (a single prescription can embody varying numbers of pills and/or dosages).

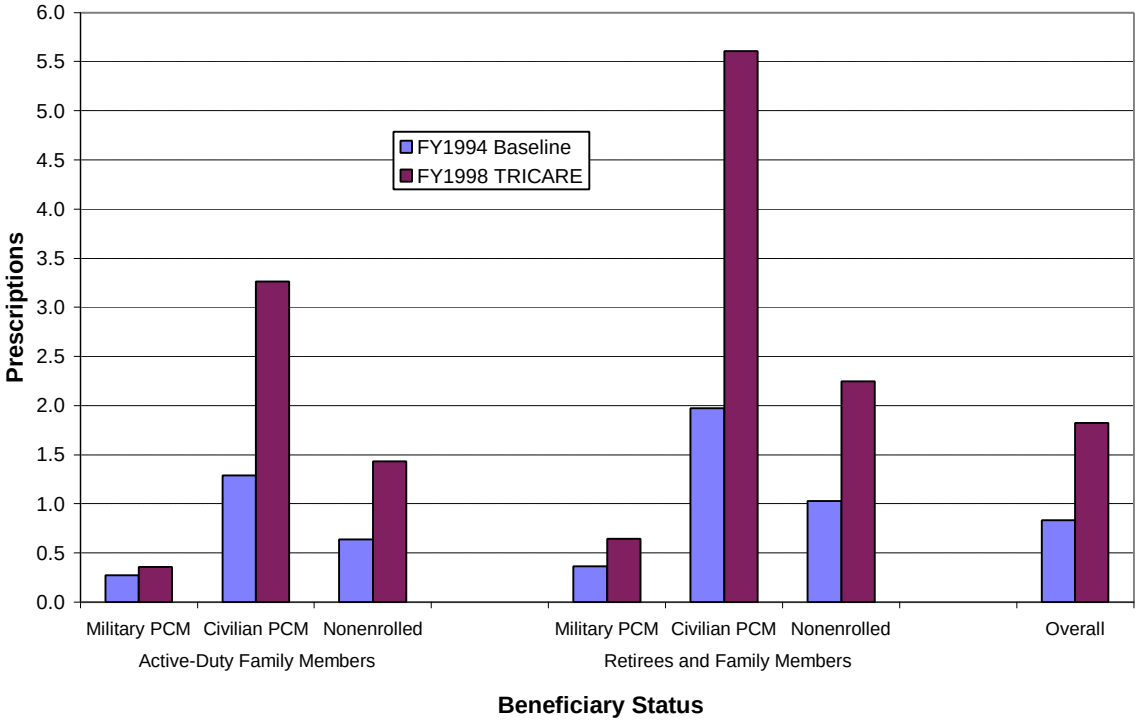

Figure 4-6. Average Annual Purchased-Care Prescription Utilization per Beneficiary

It is of interest to note that Prime enrollees with a civilian PCM were already significantly more frequent users of purchased-care prescription services than those with a military PCM before TRICARE began, as evidenced by their higher FY1994 baseline estimates. Under Prime, their prescription utilization increased by 154 percent—more than twice the baseline estimate. One possible explanation is that the increased reliance

by MTFs on formularies under TRICARE has forced some beneficiaries to fill their prescriptions at civilian pharmacies. Another possibility is that under Prime, the participating pharmacy files all prescription claims, regardless of cost. Under the traditional benefit, if a prescription cost did not meet the deductible, some beneficiaries may not have bothered to file a claim. Consequently, the additional utilization may be associated with low-cost prescriptions.

Although the TRICARE benefit appears to have its greatest impact on Prime enrollees with a civilian PCM, utilization by other beneficiary groups also increased significantly. For Prime enrollees with a military PCM, purchased-care prescription utilization increased by 61 percent (41 percent for active-duty family members and 114 percent for retirees and family members), whereas utilization more than doubled for nonenrollees. The greatly increased utilization of prescriptions by nonenrollees may seem surprising in light of the significant decline in their use of purchased-care outpatient and inpatient services. However, unlike purchased-care outpatient and inpatient services, there is no deductible for prescriptions filled at a network pharmacy. The lack of a deductible, together with a 5-percent savings off an already discounted price, is likely attracting beneficiaries receiving care in the private sector to the Extra network. TRICARE also provided a regional mail-order benefit in FY 1998 (this benefit was gradually replaced with the NMOP benefit), which makes it cheaper and more convenient for nonenrolled beneficiaries to obtain purchased-care prescriptions. Overall, there was a 143-percent increase in the prescription utilization rate under TRICARE.

Figure 4-7 shows the corresponding impact of TRICARE on purchased-care prescription costs. FY 1994 costs were inflated by the Consumer Price Index (CPI) for prescription drugs (4-year cumulative inflation of 12.9 percent). Although prescription costs increased significantly for all beneficiary groups, the magnitude was much smaller than the increase in utilization. Under the traditional CHAMPUS benefit, if a prescription cost did not meet the deductible or met it only marginally, some beneficiaries might not have bothered to file a claim. Under TRICARE Prime and Extra, network pharmacies file all prescription claims regardless of cost. The additional government costs shown in Figure 4-7 may be a consequence of automatic claims filing. Moreover, first-dollar coverage of Extra prescriptions contributed to the increases in utilization and government cost.

Although the average per capita prescription cost increased for each beneficiary group, the average cost per user actually declined for enrolled beneficiaries (from $294 to $283 per year). This implies that the government's prescription costs are going up because many more beneficiaries are using network pharmacies, not because the government is spending more per beneficiary. The average cost per prescription also declined for each beneficiary group, consistent with the earlier conjecture that increased utilization may be associated with low-cost prescriptions. The average cost per prescription declined by 20 percent for enrollees with a military PCM and by 44 percent for those with a civilian PCM. As with outpatient and inpatient services, nonenrollees experienced the largest drop—48 percent—in the average cost per prescription. Overall, the average cost per prescription declined by 45 percent.

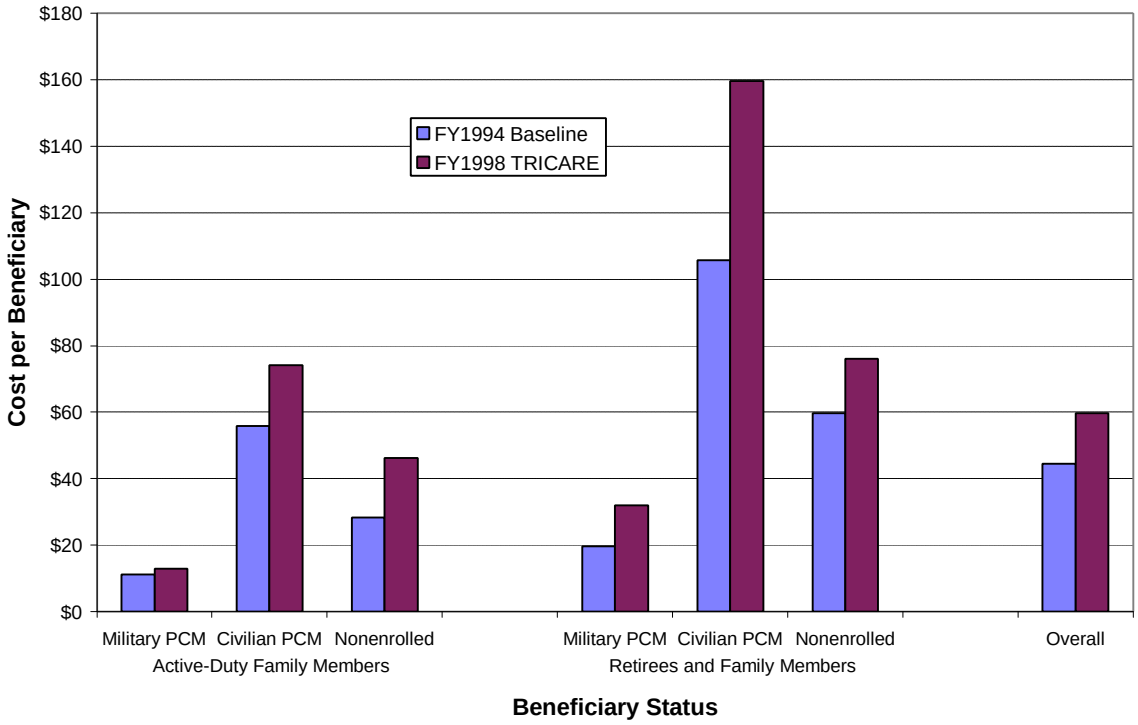

Figure 4-7. Average Purchased-Care Prescription Cost per Beneficiary

4.1.5.4 MTF Outpatient Utilization and Costs

In FY 1994, there was no centralized patient-level accounting system with information on MTF outpatient workload and costs. Although many MTFs had been reporting detailed outpatient visit information through the ADS by FY 1998, there is no comparable baseline information with which to compare it. The only comparable sources of outpatient workload and costs between FY 1994 and FY 1998 are MEPRS data. Information on outpatient workload and costs are captured in MEPRS on an aggregate basis by clinical area only. In particular, no distinction is made between Prime and space-available visits. Consequently, it was not possible to determine the effect of Prime on MTF outpatient utilization and cost.

Because of the lack of individual patient identifiers, it was not possible to estimate MTF utilization and cost models to rigorously compute the FY 1994 baseline. It was also not possible to decompose utilization and costs by enrollment option. A different procedure was used to compute the FY 1994 baseline directly from the MEPRS data. First, all MEPRS B (Outpatient) accounts that record ambulatory surgeries were eliminated from consideration (recall that ambulatory surgeries were considered as inpatient procedures for this evaluation). Next, the remaining MEPRS B accounts were partitioned into BRAC and non-BRAC areas depending on where the reporting MTF was located (including in the BRAC areas those MTFs that were rightsized based on Service initiatives).

In the BRAC areas, baseline MEPRS visit counts and costs were set equal to the FY 1998 values. The assumption here is that those levels would have been observed even in the absence of TRICARE (without a utilization model, it was not possible to separate BRAC from TRICARE effects). In the non-BRAC areas, FY 1994 utilization was scaled by the ratio

of the total eligible population in FY1998 to the total eligible population in FY1994. FY 1994 costs were inflated using the HCFA Hospital Input Price Index plus a factor for medical intensity and technology (a total of 14.4 percent). The latter index was used because, unlike civilian care, most MTF outpatient care is provided in a hospital setting. Finally, the BRAC and non-BRAC area results were combined. Table 4-2 summarizes the results.

Table 4-2. MTF Outpatient Utilization and Costs

	Visits per Capita	Average Cost per Visit	Total Cost ($Millions)
FY 1994 Baseline	6.13	$101.32	$2,355
FY 1998 TRICARE	5.20	$122.75	$2,423

It should be noted that MTF "visits" cannot be easily compared with purchased-care visits because they are measured differently. An MTF visit does not necessarily involve a face-to-face contact with a physician; it could be a phone call for medical advice. Assuming that MTFs have recorded visits consistently between FY1994 and FY 1998, the average number of visits per beneficiary declined by 15 percent under TRICARE, while the average cost per visit increased by 21 percent. This is a somewhat surprising result considering that the government bears the entire cost of an outpatient visit, and that outpatient visits might be expected to increase under TRICARE because of improved access to primary care and greater emphasis on preventive care. It follows that the average cost per visit might be expected to decrease given that preventive care visits are relatively inexpensive and that there should be fewer visits for expensive specialty care.

4.1.5.5 MTF Inpatient Utilization and Costs

Under the traditional military health care benefit of direct care and CHAMPUS, there was a priority system for access to the MTF. The group with the highest priority was (and still is) active-duty service members. Next came active-duty family members and then retirees and their family members. Because of this priority system, baseline utilization and cost estimates should vary significantly by beneficiary category. For this reason, MTF inpatient utilization and cost estimates are displayed at a greater level of detail than their purchased care counterparts. Figure 4-8 shows the effect of TRICARE on MTF inpatient utilization.

MTF inpatient utilization per beneficiary declined for all the groups studied, except for a.61-percent increase among retirees and family members enrolled with a military PCM. The latter finding is not surprising in light of the priority system for access to MTFs. Before the implementation of TRICARE, retirees had the lowest priority for obtaining space-available MTF care. Once enrolled in Prime with a military PCM, retirees receive guaranteed access to care and have a greater likelihood of being hospitalized, if needed, at an MTF rather than at a civilian facility.

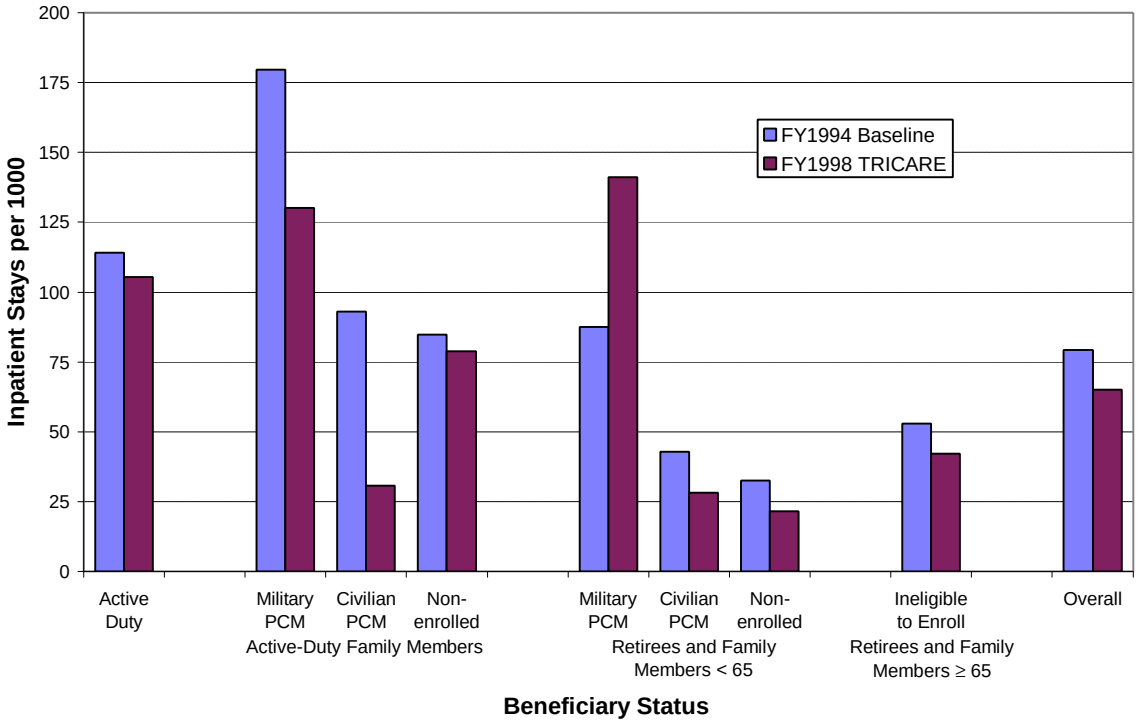

Figure 4-8. Average Annual MTF Inpatient Utilization per Beneficiary

Both active-duty family members and retirees and family members enrolled with a civilian PCM experienced large drops in utilization (72 percent and 35 percent, respectively). The large drop is possibly a result of successful application of UM at military facilities [successful because utilization has been reduced without reducing beneficiary satisfaction with the quality of care (although no reliable objective measures of health outcomes are available)]. Nonenrolled beneficiaries also experienced drops in utilization. The decline in inpatient utilization for nonenrolled active-duty family members is expected because they no longer have priority access to care at the MTFs, having ceded that access to Prime enrollees. Nonenrolled and ineligible retirees (the latter group is composed primarily of retirees and family members age 65 and over) have an even more difficult time gaining access to MTF care under TRICARE, experiencing drops in utilization of 34 percent and 21 percent, respectively. Ever since the advent of TRICARE in FY 1995, senior retirees have complained of being "squeezed out" of MTF care because they are ineligible to enroll in Prime; the results in this section seem to bear this out. Overall, MTF inpatient utilization declined by 18 percent.

Analogous to the evaluation of purchased-care inpatient utilization, the average and standard deviation of the length of hospital stays were considered as measures of TRICARE's success in controlling inpatient utilization and costs. As before, the case mix was held constant when comparing the average length of stay before and after TRICARE. From FY 1994 to FY 1998, the case-mix-adjusted average length of stay decreased from 4.4 to 3.5 days (a 20-percent decrease) whereas the standard deviation decreased from 6.9 to 4.6 days (a 34-percent decrease).

Figure 4-9 shows the effect of TRICARE on MTF inpatient costs. MTF inpatient costs in FY 1994 were inflated using the HCFA Hospital Input Price Index plus a factor for medical intensity and technology (a total of 14.4 percent). The trends are similar to those for utilization, declining in proportion to the number of hospital stays. The result is a 32-percent drop in MTF inpatient costs.

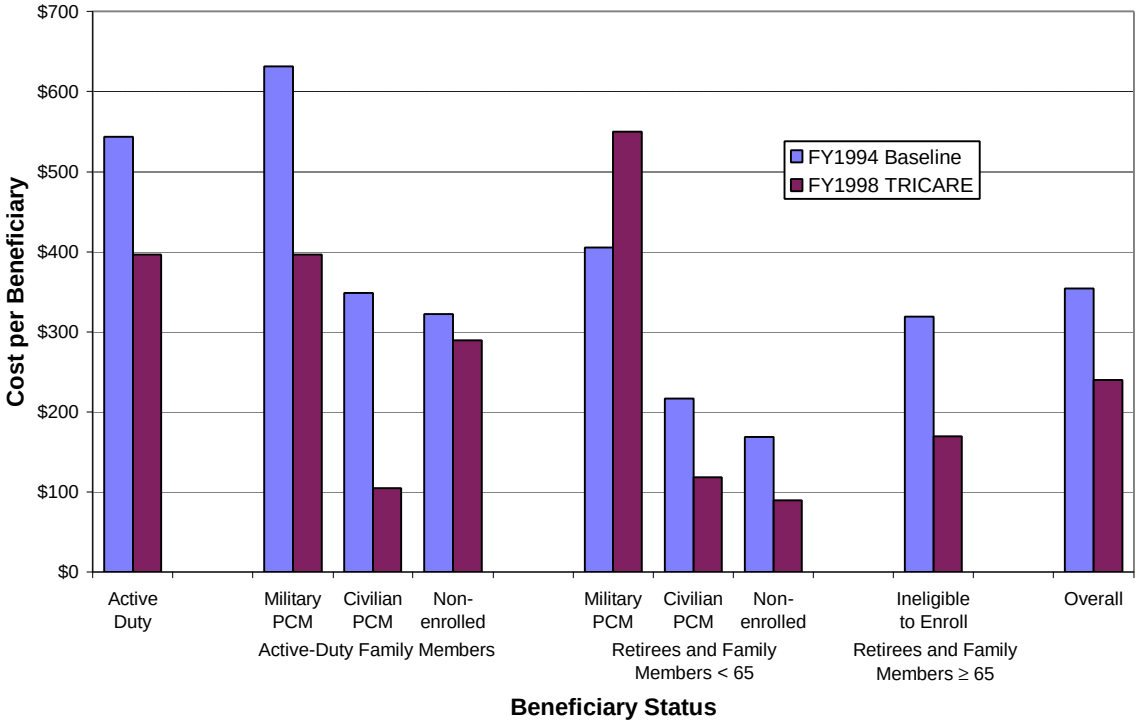

Figure 4-9. Average MTF Inpatient Cost per Beneficiary

The average government cost per MTF hospital stay declined under TRICARE for all beneficiary groups. The largest decline (33 percent) was for retirees and family members age 65 and older; the smallest decline (3 percent) was for nonenrolled active-duty family members. Overall, the average government cost per MTF inpatient stay declined by 17 percent.

4.2 Cost to the Government

In addition to the direct costs of delivering health care, the government incurs substantial indirect, or overhead, costs to support the MHS. The indirect costs are distributed into three general categories:

- Costs incurred at MTFs,
- MCS costs for purchased care, and
- System-wide overhead costs developed from the DoD budget [specifically, the Future Years Defense Program (FYDP)].

The MCS contractor collects all Prime enrollment fees (for beneficiaries having both military and civilian PCMs), and the resulting revenue reduces the net contract price. The MCS costs reported in subsequent tables are net of this revenue.

The MTFs also collect revenue from third-party collections and inpatient subsistence charges. Third-party collections are already captured in the MEPRS EBH subaccount (Third-Party Collection Administration) and are stepped down to the final operating accounts. Inpatient subsistence charges are currently zero for retired enlisted personnel, $7.50 per day for active-duty personnel and retired officers, and $10.85 per day for all other beneficiaries. Because so few beneficiaries are hospitalized in an MTF during a given 1-year window, these charges contribute a negligible offset to total direct-care cost.

Table 4-3 summarizes the estimated FY 1994 baseline costs and the actual FY 1998 TRICARE costs within the above categories. An effort was made to provide as complete an accounting of MHS costs as possible. However, as noted in the Section 733 Study:[40]

> "It is impossible to develop a complete reconciliation between MEPRS and the FYDP, partly because FYDP obligations translate into outlays over a multi-year time window. In addition, there is no standard crosswalk between MEPRS and any particular subset of PEs [Program Elements]…."

Consequently, the costs identified by the IDA study team do not align completely with the FY 1998 Defense Health Program (DHP). The DHP for FY 1998 was $15.8 billion, whereas total worldwide costs identified from DoD information systems were only $14.1 billion.

A detailed discussion of Table 4-3, as well as a description of the content of each cost category, is provided in the following subsections.

4.2.1 Direct-Care Costs

The estimation of inpatient and outpatient direct-care costs has already been explained. In particular, the FY 1994 baseline costs were obtained by inflating FY1994 actual costs, adjusting for BRAC and other Service rightsizing initiatives, and standardizing the beneficiary population. Table 4-3 reveals that outpatient costs increased slightly under TRICARE, but inpatient costs decreased dramatically. The large offset in costs from substituting outpatient for inpatient care indicates successful application of managed care at MTFs.

The pharmacy costs associated with inpatient and outpatient care are recorded in the DAA account of MEPRS and stepped down to the final operating accounts shown in Table 4-3. Pharmacy costs in the TRICARE regions increased from $579 million (after adjusting FY 1994 costs for a reduction in the eligible population, BRAC effects, and 16.6 percent cumulative inflation in the Producer Price Index for prescription preparations[41]) to $726 million.

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[40] Matthew S. Goldberg et al., "Cost Analysis of the Military Medical Care System: Final Report," Institute for Defense Analyses, Paper P-2990, September 1994.

[41] The Producer Price Index (PPI) actually increased by over 33 percent from FY 1994 to FY 1998. However, half of that increase is attributable to an increase in the cost of psychotherapeutic drugs. Because the large increase in the psychotherapeutics index resulted from price changes by a small number of producers for a small number of drugs, the PPI was likely affected by sampling variability. Exclusive of psychotherapeutics, prices for prescription drugs rose 16.6 percent from FY 1994 to FY 1998. See the Bureau of Labor Statistics Special Notice for Prescription Drugs Index at http://stats.bls.gov/ppidrug.htm for more details.

Table 4-3. Comparison of Baseline with TRICARE Costs in Evaluated Regions (Millions of FY 1998 Dollars)

Source	Account/Program Element	FY 1994 Baseline	FY 1998 TRICARE	Difference
Direct Care	MEPRS A (Inpatient)	$1,864.2	$1,261.2	–$603.0
	MEPRS B (Outpatient)	2,355.0	2,423.1	68.1
	MEPRS C (Dental)	433.0	433.0	0.0
	MEPRS F (Special Programs)			
	Affected by TRICARE	371.8	489.1	117.3
	Unaffected by TRICARE	480.6	480.6	0.0
	MEPRS G (Readiness)	126.9	126.9	0.0
	Military Pay Adjustment	101.9	94.4	–7.6
	Military Construction	197.1	182.5	–14.6
	Contractor Administrative Cost[a]	0.0	13.3	13.3
	Subtotal	$5,930.5	$5,504.0	–$426.5
Managed Care Support	Inpatient	$846.5	$721.9	–$124.5
	Outpatient	923.7	839.9	–83.8
	Prescriptions	153.5	205.2	51.7
	National Mail Order Pharmacy	0.0	13.3	13.3
	Capital Construction/DME	86.6	85.0	–1.6
	Special and Emergent Care[a]	7.2	7.2	0.0
	Other Pass–Through Costs[a]	0.0	2.1	2.1
	Resource Sharing Adjustment	0.0	–46.5	–46.5
	Contractor Administrative Cost[a]	0.0	348.6	348.6
	Government Administrative Cost[b,c]	114.5	35.7	–78.8
	Subtotal	$2,131.8	$2,212.5	$80.7
FYDP[d]	Affected by TRICARE			
	Management Headquarters	$33.1	$35.3	$2.2
	MHS IM/IT	158.4	133.3	–25.2
	TRICARE Management Activity	0.0	48.9	48.9
	Armed Forces Institute of Pathology	31.8	34.2	2.4
	Unaffected by TRICARE			
	Examining Activities – Health Care	23.8	23.8	0.0
	USUHS	43.4	43.4	0.0
	Armed Forces Health Scholarship	48.7	48.7	0.0
	Other Health Activities	239.1	239.1	0.0
	Subtotal	578.4	606.7	28.3
Overall	Total Government Cost	$8,640.6	$8,323.2	–$317.5

Note: Costs exclude Regions 1, 2, 5, Alaska, and overseas.

[a] Weighted average of two option years for each TRICARE region, where weights are proportions of those years that fell within FY 1998.

[b] Includes both the costs of OCHAMPUS and fiscal intermediaries in FY 1994; includes only the cost of TMA–Aurora in FY 1998. The cost of fiscal intermediaries in FY1998 is already captured in the contractor administrative cost.

[c] Allocated to TRICARE regions by share of total purchased care operating cost.

[d] Allocated to TRICARE regions by share of total MHS operating cost.

No major changes to the dental benefit have occurred under TRICARE. Actual FY 1998 dental costs in the TRICARE Regions were $433 million. Rather than inflating the actual FY 1994 cost to represent the baseline, the actual FY 1998 cost (i.e., the $433 million) was used in both columns. The judgment here is that costs of $433 million

would have been incurred even in the absence of TRICARE. Placing this figure in both columns provides a complete accounting of FY 1998 costs, while forcing to zero the difference in dental costs attributable to TRICARE.

The same procedure was followed in the other rows of Table 4-3 corresponding to cost categories that were not affected by TRICARE. For example, the F (Special Programs) account in MEPRS contains some subaccounts that may be affected by TRICARE and others that, by their nature, should not be affected by TRICARE. The former set of subaccounts is shown in Table 4-4 and was arrived at by a committee representing the TMA and the Surgeons General of the three Military Services. As detailed in Table 4-4, the costs affected by TRICARE increased from $372 million to $489 million.[42]

Table 4-4. MEPRS F Subaccounts Affected by TRICARE in Evaluated Regions (Millions of FY 1998 Dollars)

Subaccount	Description	FY 1994 Baseline	FY 1998 TRICARE	Difference
FAA	Area Reference Laboratories	$2.8	$2.7	–$0.1
FAH	Clinical Investigation Program	22.5	22.6	0.1
FAL	Continuing Health Education	41.1	41.3	0.2
FBI	Immunizations	25.0	51.7	26.7
FBJ	Early Intervention Services	0.0	2.5	2.5
FBK	Medically Related Services	0.0	0.1	0.1
FBL	Multidisciplinary Team	0.0	0.6	0.6
FCA	Supplemental Care	35.2	31.3	–3.9
FCB	Guest Lecturer and Consultant Program	4.1	4.3	0.2
FCC	CHAMPUS Beneficiary Support	174.4	240.0	65.6
FCD	Support to Other Military Medical Activities[a]	21.3	12.7	–8.6
FCG	Support to Non-MEPRS Reporting Medical Activities	1.4	7.6	6.2
FCH	Active Duty Emergency	0.0	9.3	9.3
FCZ	Health Care Services Support, Not Elsewhere Classified	0.0	0.0	0.0
FDF	Urgent Minor Construction	1.2	14.0	12.8
FEA	Patient Transportation	37.0	39.9	2.9
FEB	Patient Movement Expenses	5.6	8.3	2.7
FEZ	Patient Movement and Military Patient Administration, Not Elsewhere Classified	0.3	0.2	–0.1
	Total	$371.8	$489.1	$117.3

Note: Excludes Regions 1, 2, and 5.
[a] Includes prescription costs only; borrowed labor costs reported in A and B accounts.

The largest contributors to the increase in F-account costs were the FCC subaccount, covering prescriptions written by civilian physicians but filled at MTFs; and the FBI subaccount, covering immunizations and reflecting TRICARE's emphasis on preventive

[42] Non-prescription expenses in the former figure are adjusted for cumulative inflation of 6.6 percent between FY 1994 and FY 1998, using the DoD outlay deflator for Operations and Maintenance less fuel and pay. The source is Office of the Under Secretary of Defense (Comptroller), "National Defense Budget Estimates for FY 2001," March 2001, Table 5-9, p. 51. Prescription expenses are adjusted by the PPI for prescription preparations.

care. The FCD account records the costs associated with personnel loaned between MTFs and prescriptions written by a physician at one MTF but filled by the pharmacy at a different MTF. In the former case, the personnel costs are recorded in both the FCD account of the lending MTF and in the A or B account of the borrowing MTF. Thus, to the extent that FCD includes borrowed labor, these costs are double-counted. However, the prescription costs embedded in FCD are counted only once (at the pharmacy that fills the prescription), and must be included for a complete analysis. Using Stepdown Assignment Statistics (data assignment factors that measure the amount of services rendered by intermediate work centers to other work centers), borrowed labor costs can be separated from prescription costs in the FCD account. In FY 1994, 34 percent of FCD costs were for prescriptions, whereas in FY 1998 that percentage declined to 13 percent. Hence, the FCD prescription costs are included in the analysis, but the remainder is excluded because it would duplicate personnel costs already recorded in the A or B accounts.

MEPRS estimates military personnel costs by applying standard DoD Comptroller pay factors to full-time equivalent labor utilization. However, these pay factors are based on the average of bonuses and special pays across an entire Military Service and are not specific to the medical occupations. Thus, they may understate the pay of military physicians, who earn more than the typical officer of the same rank. Conversely, they may overstate the pay of medical enlisted personnel, who do not receive as much sea pay or hazardous-duty pay as their non-medical counterparts. The military pay adjustment in Table 4-3 is obtained by substituting medical-specific pay factors for the generic pay factors used internally to MEPRS. The pay adjustment turns out to be almost identical in the baseline and TRICARE columns, so the net effect of this adjustment on the comparison is negligible.

Minor military construction is funded by the Operations and Maintenance (O&M) appropriation, is included in the MTF budget, and is reported in MEPRS. However, major military construction is centrally funded by the Military Construction (MilCon) appropriation and is neither included in the MTF budget nor reported in MEPRS. During the Section 733 Study, IDA developed a military-construction adjustment factor.[43] That factor was updated for use in the current study. The actual MilCon appropriation tends to be volatile from one year to another, as major construction projects (e.g., building a new hospital or adding a new wing to an existing hospital) are started or completed. Instead, it was determined that a fund could be established, earning interest at the 30-year Treasury rate, to generate enough revenue to eventually replace every MTF in the continental United States after a 40-year life span. This fund would require annual deposits equal to 3.5 percent of reported MEPRS operating costs. Thus, a 3.5-percent factor was adopted as a smooth estimate of military construction costs. Because the MEPRS costs are almost identical in the baseline and TRICARE columns, the net effect of this adjustment on the comparison is negligible.

Finally, Contractor Administrative Cost represents services that the MTFs chose to purchase through the MCS contractor rather than directly from the civilian economy. For

[43] Matthew S. Goldberg et al., "Cost Analysis of the Military Medical Care System: Final Report," Institute for Defense Analyses, Paper P-2990, September 1994.

example, the Region 11 Lead Agent paid the MCS contractor to install and maintain a region-wide clinic appointment system. These same services may have been purchased during FY 1994, albeit directly by the MTFs because the MCS contracts were not yet in place. Thus, the corresponding costs are presumably embedded in the preceding figures in the baseline column, and the figure zero is shown for Contractor Administrative Cost in the baseline.

On balance, direct-care costs were $427 million lower under TRICARE than in the baseline estimate.

4.2.2 Managed-Care Support Costs

Because the actual cost to the government is determined by the value of the fixed-price MCS contracts, including change orders and bid-price adjustments (BPAs), the purchased care claims do not accurately reflect the true government cost. In particular, the claims submitted by network subcontractors report costs estimated from the TRICARE Standard price schedules (e.g., the CMAC and DRG rates) rather than true costs.[44] However, the claims are still useful for allocating costs to regions[45] (see Appendix L), beneficiary groups, and inpatient, outpatient, and prescription services.

All the at-risk health care prices (including profit) reported here are current as of the most recent BPA. The costs for Region 11 are current through BPA 5; the costs for Region 6 and Regions 9, 10, and 12 through BPA 4; and the costs for Regions 3 and 4 and TRICARE Central through BPA 3. The first BPA updated the health care prices for actual base period data (the Data Collection Period—the year immediately preceding the first contract option period) and for revised government projections of the beneficiary population and MTF utilization in the option periods. Subsequent BPAs account for the impact of actual data for the previous option period, including risk sharing, and reflect the impact of updated projections for population and MTF utilization for the present and future option periods, but not actual data or risk sharing for those option periods.[46] The health care prices, and the administrative prices shown, also reflect the most current settled contract modifications.

The health care prices also include an adjustment for the non-claims portion of FY 1998 resource sharing costs.[47] These costs are included in the MCS contract in

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[44] Some network subcontractors are funded through capitated arrangements with the MCS contractors. Their capitated payments do not exactly correspond to the total government costs reported on the purchased care claims.

[45] With the exception of Regions 6 and 11, the MCS contracts cover more than one region. A single contract covers Regions 3 and 4, and another covers Regions 9, 10, and 12.

[46] Additional BPAs will eventually be negotiated to reflect actual workload and cost experience during Option Periods 2 through 5. In principle, subsequent BPAs may involve either increases or decreases in contract costs.

[47] There are two components to the purchased-care portion of resource sharing (formerly Partnership Program) costs: expenditures for physician services on a fee-for-service basis, and salaries for physicians contracted to provide services at MTFs. The former are already included in the purchased-care claims; the latter, though included in the FY 1994 CHAMPUS program totals, are not separately identifiable.

FY 1998 but have been deleted for the purpose of this evaluation because the corresponding FY 1994 Partnership Program costs were unavailable.

As determined from the most recent purchased-care claims, both outpatient and inpatient MCS costs decreased substantially under TRICARE. However, this simple comparison ignores prescriptions, an expense that was implicitly included when calculating direct care costs. Although there was a 42-percent increase in prescription costs, the increase was not nearly enough to offset the savings in outpatient and inpatient services. Overall, purchased health care costs under TRICARE are $143 million lower than the baseline estimate.

There are several additional cost elements for which the government is responsible but for which the MCS contractors are not at risk. These include capital construction and direct medical education (DME),[48] special and emergent care, and other pass-through costs. In FY 1998, these cost elements were obtained explicitly as line items in the MCS contract. Capital construction and DME were estimated as 4.5 percent of the total health care cost in FY 1994.[49] In FY 1998, the total nationwide amount expended on capital construction and DME ($120 million) was allocated to the TRICARE regions using the proportion of non-mental-health inpatient costs incurred in those regions. The cost of special and emergent care in FY 1994 was set equal to the FY 1998 figure because that element was considered to be unaffected by TRICARE. Finally, the other pass-through costs did not apply in FY 1994 and were set to zero in that year.

The most striking feature of the MCS contracts is the large increase in administrative costs. The cost accounting system changed between FY 1994 and FY 1998. The MCS contracts were not yet in place during FY 1994; thus, the Contractor Administrative Costs were zero. The Government Administrative Costs for FY 1994 represent OCHAMPUS and the FIs. The $114.5 million figure in Table 4-3 represents the 5.95 percent overhead rate applied to the $1.9 billion of direct health-care costs in the TRICARE regions. The FI function was shifted to the MCS contractor in FY 1998. Thus, at a national level, the only remaining Government Administrative Cost was $56.8 million for TMA–Aurora, of which $35.7 million was allocated to the TRICARE regions based on their share of total purchased-care operating cost.

The Contractor Administrative Cost of $349 million includes the FI function now performed under the MCS contract. It also includes the following new functions introduced under TRICARE:

- Peer Review Organizations (a panel of physicians who monitor hospitals to assure the medical necessity and quality of services provided to beneficiaries),
- UM for referrals (a process that determines the need for specialty care and directs referrals to the appropriate provider),

[48] DME includes stipends for residents, salaries for teaching personnel, and overhead for residency programs.

[49] This factor was provided by OASD(HA).

- Case management (a collaborative process that evaluates and implements options and services to meet complex health needs through communication and available resources to promote quality, cost-effective outcomes),
- Health Care Information Line (a free 24-hour telephone line that beneficiaries can call to receive pre-recorded information on various health topics, or to receive medical advice and assistance from registered nurses),
- Handbooks and newsletters (literature that provides information about health issues and benefits), and
- TRICARE Service Centers (offices staffed by Health Care Finders and a Beneficiary Services Representative who can help beneficiaries with their health care questions).

Notice that the costs for these functions are classified in the managed-care support category rather than in the direct-care category. Some of these functions are designed to reduce the utilization of beneficiaries already using the MTFs, thereby freeing space to recapture some workload into the MTFs that had previously been purchased from the civilian sector. If these efforts are successful, the net effect should be an overall reduction in MCS contract costs. However, as Table 4-3 shows, there was no net reduction in cost, but rather a net increase of $81 million. That is, the high contractor administrative costs more than offset the savings in health care costs. On the other hand, the MCS administrative functions may be partly responsible for the increases in beneficiary access and satisfaction reported earlier.

Including Contractor Administrative Cost in both the direct care ($13million) and MCS ($349 million) categories, administrativecosts make up 17 percent of the total MCS contract value. Figure 4-10 compares administrative costs in FY1998 across the TRICARE regions.

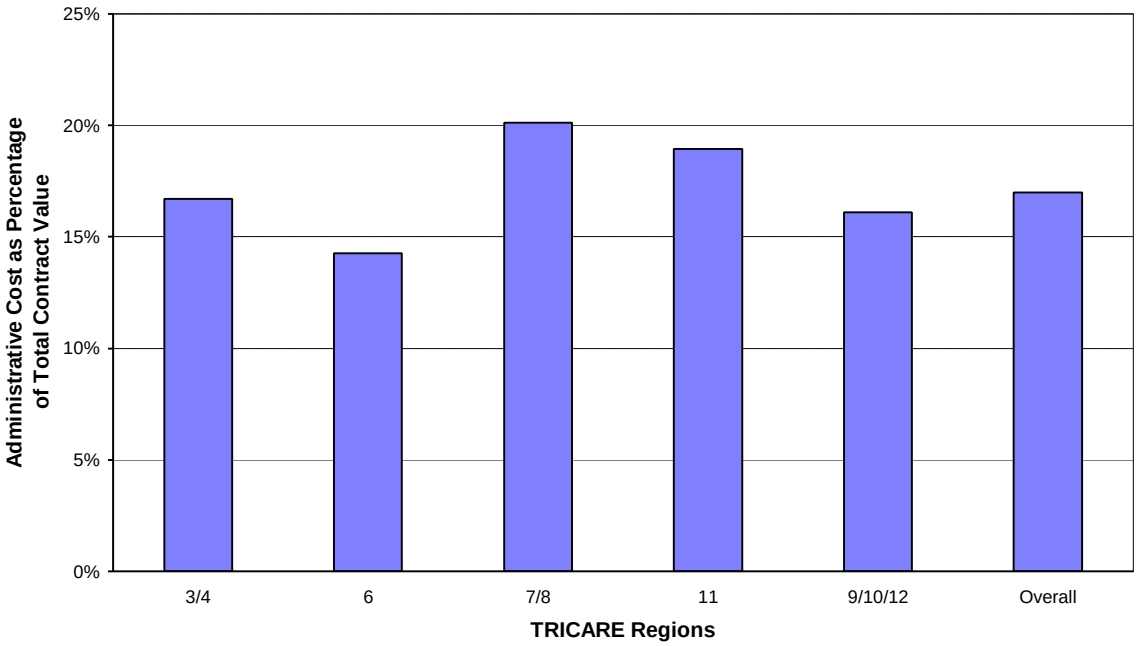

Figure 4-10. MCS Administrative Costs

Note that TRICARE Central (Region 7/8), new to this year's evaluation, has the highest administrative cost as a percentage of total contract value. TRICARE Central also has the second largest contract value ($452 million) of any region under evaluation.

4.2.3 FYDP Costs

Several other costs of running the DoD health-care system were estimated. These costs, which were determined not to be already included in MEPRS or the MCS contracts, were identified from the FYDP (see Appendix N for a description of the Program Elements used) and then allocated to the TRICARE regions based on their 58-percent share of total direct-care operating costs. For example, the MHS IM/IT and TMA Program Elements capture the information systems and oversight functions of OASD(HA) and TMA that support the administration of the MHS. These costs may well have been affected by TRICARE.[50] Conversely, the Other Health Activities category captures readiness and other costs that are not likely affected by TRICARE. Thus, the FY 1998 allocation of $239 million to the TRICARE regions was placed in both the baseline and TRICARE columns. The net effect of the FYDP costs on the comparison is a $28-million increase as a result of TRICARE. The increase is attributable almost exclusively to OASD(HA) and TMA administration costs.

4.2.4 Total DoD Cost per User

Total government cost is but one measure of the efficacy of TRICARE. It is an incomplete measure in the sense that it does not account for the number of beneficiaries who actually use the MHS. Thus, it is possible for the total cost to be lower under TRICARE but for the cost per user to be higher. To examine this possibility, estimates of the percentage of beneficiaries in FY 1994 and FY 1998 who were reliant on the MHS for at least some of their health care were obtained from the TMA (Office of Resource Management). The TMA estimated those percentages from responses to the MHS User Surveys, conducted twice annually.

Adjusting for the change in the beneficiary distribution between FY 1994 and FY 1998, the estimated percentage of MHS-reliant beneficiaries in the TRICARE regions remained virtually the same (71.0 percent in FY 1994, 71.3 percent in FY 1998). TRICARE has therefore maintained approximately the same number of MHS-reliant beneficiaries while not attracting "ghost" beneficiaries back into the system. Applying the estimated percentages to the beneficiary population in FY 1998 yields a total DoD cost (i.e., all direct and purchased health care, administrative, and overhead costs) per user of $2,310 under the baseline and $2,218 under TRICARE. Thus TRICARE is somewhat less costly to the government on a per user basis than the traditional health care benefit.

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[50] The FY 1994 costs affected by TRICARE were adjusted for cumulative inflation before making the comparison. Appropriate deflators were applied separately to the O&M and Military Pay components of each program element. In this case, the deflators used were the DoD Total Obligational Authority for O&M less fuel and pay, and for Military Pay, respectively. The source is "National Defense Budget Estimates for FY 2001," Table 5-5, p. 47.

4.2.5 Summary

Overall, MHS costs in the TRICARE regions were $317 million lower than those estimated for the baseline. Considering only those costs that could reasonably have been affected by TRICARE (i.e., all direct care costs except dental, readiness, and MEPRS F accounts unaffected by TRICARE; all MCS costs except special and emergent care; and certain FYDP costs enumerated in Table 4-3), the net savings in FY 1998 was 4.4 percent. However, TRICARE costs could have been even lower had it not been for a large administrative cost built into the MCS contracts. Moreover, prescription costs increased across the board: prescriptions filled at MTF pharmacies in connection with MTF visits (up $81 million), prescriptions written by civilian physicians but filled at MTF pharmacies (up $66 million), and prescriptions filled at MCS network pharmacies (up $52 million). In addition, the new NMOP benefit increased costs by another $13 million. The pattern of escalating prescription costs is not unique to TRICARE, however. Prescription costs have been spiraling ever higher in the civilian sector as well.

Although the government realized a decrease in its costs under TRICARE, approximately half of the decrease appears to be attributable to reduced utilization of the MHS by nonenrolled beneficiaries (including retirees and family members age 65 and over). As shown earlier in this chapter, MTF inpatient utilization by nonenrollees declined by 26 percent, and purchased-care inpatient and outpatient utilization each declined by about 5 percent. Table 4-5 shows the resulting impact on the reduction in government costs. Only health-care costs are included in Table 4-5, as other costs (e.g., administrative costs) cannot easily be allocated by beneficiary type. It was not possible to break out MTF outpatient costs by beneficiary category.

Table 4-5. Sources of Government Cost Reductions Under TRICARE

Beneficiary Group	Enrollment Status	Purchased Care	Direct Inpatient Care
Active Duty	Military PCM	n/a	–$133.9
Active-Duty Family Members	Military PCM	–36.0	–167.0
Active-Duty Family Members	Civilian PCM	54.7	–37.0
Active-Duty Family Members	Nonenrolled	–21.2	–14.0
Retirees and Family Members < 65	Military PCM	24.4	38.9
Retirees and Family Members < 65	Civilian PCM	101.8	–16.7
Retirees and Family Members < 65	Nonenrolled	–280.2	–132.6
Retirees and Family Members≥ 65	Ineligible	n/a	–140.8
	Total	–$156.5	–$603.1

According to the 1998 Health Care Survey of DoD Beneficiaries, 14 percent of nonenrollees added private insurance coverage because of TRICARE. Furthermore, under TRICARE there has been a decline in the incidence of purchased-care claims filing by nonenrollees with private health insurance. As alluded to earlier, one of the likely reasons for reduced claims filing by beneficiaries with private health insurance is the general population trend toward more HMO and preferred-provider plans and away from traditional fee-for-service plans. The minimal copayments typically required by the former plans may obviate the desire of beneficiaries to file claims.

5. COST TO COVERED BENEFICIARIES

In addition to direct care, MHS beneficiaries are eligible to obtain health services under either TRICARE or Medicare. The first section of this chapter evaluates the effect of TRICARE on the out-of-pocket expenses of TRICARE-eligible beneficiaries. Out-of-pocket expenses include deductibles and copayments for purchased care, TRICARE Prime enrollment fees, and premiums for TRICARE supplemental and other private health insurance policies.[51] Since MTF charges are negligible, these are not considered in the analysis.

The next section analyzes the effect of TRICARE on the costs to Medicare-eligible beneficiaries. Costs affected by TRICARE include Medicare deductibles and copayments, and insurance expenses. Most Medicare beneficiaries are ineligible for purchased care, but they can obtain health services at MTFs at minimal or no expense if space is available. TRICARE may have affected Medicare-eligible beneficiaries by reducing their access to MTFs, causing them to seek more costly private-sector care under Medicare.

To evaluate costs to both TRICARE-eligible and Medicare-eligible beneficiaries, the beneficiary family is used as the unit of analysis. This is because insurance decisions are made on a family basis, and because deductibles are capped for families. For the purpose of this evaluation, a "family" is defined as a group of individuals who are eligible either for purchased care (TRICARE-eligible family) or Medicare (Medicare-eligible family). A "real family" may include both TRICARE and Medicare eligible subfamilies. It may also include other family members who are not eligible under either health insurance system. Individuals who are ineligible for care under both systems are excluded from the analysis.

The FY 1994 and FY 1998 family samples (see Appendix J) are used to estimate expenses for individuals. These expenses are then aggregated to the family level. Active-duty sponsors with no other eligible family members were excluded because they receive all their care from MTFs. Also excluded were families who did not live exclusively in the areas covered by TRICARE in FY 1998 (Regions 3, 4, 6, 7/8, and 9 through 12), families with members in more than one TRICARE region, families affected by BRAC, and families with missing or implausible data. The final samples are as follows: 103,627 TRICARE-eligible families in FY1994 and 106,762 in FY 1998; 27,319 Medicare-eligible families in FY1994 and 45,871 in FY 1998.

To estimate the effects of TRICARE, actual costs in FY 1998 were compared to an estimate of what costs would have been in FY 1998 for a baseline group of families. The baseline group consists of families that are the counterparts of the families observed in FY 1998. For example, for the analysis of TRICARE eligibles, families were classified prospectively in FY 1994 based on whether they enrolled in Prime in FY 1998 and, if so, whether they were assigned a military or a civilian PCM. For the baseline families, costs

[51] Under TRICARE, the incidence of outpatient surgeries has increased while the length of hospital stays has decreased. This may force some beneficiaries to obtain post-surgical nursing/health care at home. No data are available to estimate TRICARE's effect on those expenses.

for deductibles and copayments in FY 1994 were updated for inflation between FY 1994 and FY 1998. Insurance expenses in FY 1998 were estimated for all families. The difference between actual total expenses in FY 1998 and those of the baseline families in FY 1998 measures the effect of TRICARE.

The next two sections analyzing costs for TRICARE-eligible and Medicare-eligible families are organized similarly. They begin with a discussion of the health insurance system (TRICARE or Medicare), focusing on the cost-sharing features that bear upon the analysis of out-of-pocket expenses. Next, they discuss supplemental and private health insurance; then the effects of TRICARE on insurance coverage. After that, they present health services utilization rates in FY1994 and FY 1998, i.e., before and after TRICARE. Following that, each section describes the computational methodology and then analyzes the effects of TRICARE on out-of-pocket expenses. The final section of the chapter is a summary of the key findings.

5.1 Cost to TRICARE-Eligible Beneficiaries

5.1.1 Deductibles and Copayments Under TRICARE

Cost-sharing features of TRICARE were presented earlier in Table 2-2. The cost to the beneficiary depends on the TRICARE option selected and sponsor status. There are no deductibles under TRICARE Prime. For nonenrolled family members of junior-enlisted personnel (paygrade E1–E4), the annual outpatient deductible is $50 per individual and $100 per family. For all other beneficiaries (excluding active-duty members, who receive all their care at military facilities), the deductible is $150 per individual and $300 per family.

There are substantial copayments for nonenrollees (especially retirees); for Prime enrollees copayments are minimal.[52] For example, under TRICARE Standard a retiree can pay up to $390 per day for a hospital stay. A TRICARE Prime enrollee pays much less—only $11 per day.

Under TRICARE Prime, retirees pay an annual enrollment fee of $230 per individual or $430 per family.[53] There are no enrollment fees for active-duty family members.

Under all TRICARE options, there is a catastrophic cap, which varies by sponsor type. For active-duty families, the catastrophic cap is $1,000 per year, whether or not they enroll in Prime. For retiree families, it is $3,000 under TRICARE Prime and $7,500 under the other options.

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[52] Non-active-duty members with a military PCM still incur copayments under TRICARE when they are referred to the civilian network for care. Additionally, there are substantial point-of-service (POS) copayments if an enrollee uses an out-of-network provider without prior authorization. Because of the substantial costs involved, however, the POS option is rarely used.

[53] The enrollment fee policy was changed in FY 1998 to ensure that enrollees who moved to another region during the year did not have to pay an additional enrollment fee.

5.1.2 TRICARE Supplemental Insurance

Under TRICARE Standard and Extra, the beneficiary must pay a deductible before the government shares in the cost. Under all the TRICARE options, beneficiaries face the prospect of copayments, although these are very limited under Prime (if the beneficiary uses network providers exclusively). While catastrophic caps limit financial losses, the beneficiary may not be prepared to pay the maximum liability under a plan. To cover the financial risk above the TRICARE plan's deductible, some beneficiaries purchase a TRICARE supplemental policy.

Because beneficiary costs are a function of the TRICARE option selected and sponsor status, it is not surprising that these factors also affect the cost of a supplemental policy. Table 5-1 gives the average cost of TRICARE supplemental policies in FY 1998 for active-duty and retiree families. For active duty families the average cost of a Standard supplemental policy is $105 for a spouse and $98 for each child; for a TRICARE Prime supplemental policy the average cost is $83 for a spouse and $51 per child.

Table 5-1. Average Cost of TRICARE Supplemental Policies in FY 1998

Beneficiary Group	Family Member	Standard Supplemental[a]	Prime Supplemental[b]
Active-Duty Families	Sponsor	n/a	n/a
	Spouse	$105	$83
	Each Child	98	51
Retiree and Spouse Under 40	Sponsor	224	75
	Spouse	271	101
	Each Child	188	60
Retiree and Spouse 40–44	Sponsor	236	75
	Spouse	287	101
	Each Child	188	60
Retiree and Spouse 45–49	Sponsor	276	88
	Spouse	336	116
	Each Child	188	60
Retiree and Spouse 50–54	Sponsor	361	115
	Spouse	425	136
	Each Child	188	60
Retiree and Spouse 55–59	Sponsor	446	124
	Spouse	503	148
	Each Child	188	60
Retiree and Spouse 60–64	Sponsor	537	154
	Spouse	585	160
	Each Child	188	60

[a] Average cost of policies with no deductible for inpatient and outpatient services for 18 companies. Source is the *Army Times*, Special Section, "CHAMPUS/TRICARE User's Guide," March 9, 1998.

[b] Data are for Prime supplemental policies offered by the Military Benefits Association. Premiums for other companies were not given in the *Army Times*.

For retiree families, the cost of a Standard supplemental policy is higher because of greater utilization, higher copayments, and a larger catastrophic cap. The cost is a function

of the age of the insured. A TRICARE Prime supplemental policy for retirees also costs much less than one for TRICARE Standard.

5.1.3 Employer-Sponsored Health Insurance

Another way of covering the cost of TRICARE copayments is to obtain other health insurance (OHI) through a civilian employer. In this case, TRICARE becomes the "second payer" and virtually all costs above the TRICARE deductible are paid by either the private insurance policy or TRICARE. However, most families who purchase such a policy "opt out" of the TRICARE system entirely (i.e., they do not bother to file any purchased-care claims).[54]

In the civilian economy, approximately three out of four full-time employees participate in employer-sponsored health plans.[55] Most employers pay some of the policy cost.[56] Unlike TRICARE supplemental insurance, the contribution of the employee is not based on his/her age; all are charged the same amount.

According to a Kaiser Family Foundation survey, the average deductible for an individual with employer-sponsored health insurance was $243 in 1998; typically the coinsurance rate was 20 percent.[57] This deductible is higher than for nonenrolled retirees under TRICARE Standard ($150). Hospital copayments are relatively high under TRICARE Standard compared to employer-sponsored insurance .

According to HCFA's extensive Medical Expenditure Panel Survey of employers in 1997, an employee's expected cost for health insurance was $320 for an individual policy and $1,305 for family coverage. These estimates reflect the fact that some employees pay nothing because the employer pays the entire cost of the policy. According to Kaiser Foundation surveys, health policy costs for active employees increased by 3.7 percent in 1998.[58] Using the 3.7 percent inflation factor, an employee's expected costs in 1998 were $332 for a single policy and $1,353 for family coverage.

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[54] Of those families with private health insurance, 37 percent filed a claim for reimbursement from TRICARE in FY 1998.

[55] Bureau of Labor Statistics, "Employee Benefits in Medium and Large Private Establishments, 1997," Press Release USDL-99-02, January 7, 1999, p. 2. Some part-time employees also have coverage but their participation rates are much lower.

[56] Ibid., p. 10.

[57] Kaiser Family Foundation, Employer Health Benefits, 1999 Annual Survey, p.61.

[58] Kaiser, p.14.

5.1.4 Effect of TRICARE on Insurance Coverage Decisions

TRICARE and private health insurance are alternative health insurance plans.[59] Those who enroll in Prime are likely to drop any private insurance coverage they may have had, whereas those who choose not to enroll may be "squeezed out" of the MTF and forced to add private insurance or a TRICARE supplemental policy.

How did TRICARE affect the health insurance coverage of MHS beneficiaries? The 1998 Health Care Survey of DoD Beneficiaries asked respondents about their insurance coverage and whether TRICARE had any effect on their insurance coverage decisions. Separate questions were asked about supplemental insurance and other private health insurance.[60] Table 5-2 summarizes the results by beneficiary group and enrollment status.[61]

Retiree families tend to have more insurance than active-duty families. Nonenrollees have more civilian health insurance than enrollees. Prime enrollees reduced their other health insurance; nonenrollees increased theirs. Supplemental insurance coverage was essentially unchanged for Prime enrollees, but it increased for nonenrollees.

Table 5-2. Effect of TRICARE on Insurance Coverage

		Net Change Due to TRICARE		FY 1998 TRICARE	
Beneficiary Group	Enrollment Status	Supplemental Insurance	Other Health Insurance	Supplemental Insurance	Other Health Insurance
Active-Duty Family Members, E1–E4	Military PCM	0.0%	-1.8%	11.8%	2.4%
	Civilian PCM	-3.6	-5.1	11.0	4.7
	Nonenrolled	8.0	3.4	15.4	15.3
Active-Duty Family Members, E5 and Above	Military PCM	1.0	-0.2	9.5	6.1
	Civilian PCM	2.0	-0.7	9.9	9.7
	Nonenrolled	10.7	7.1	20.2	21.6
Retirees and Family Members	Military PCM	-2.3	-3.4	16.4	12.1
	Civilian PCM	0.7	-3.6	15.6	10.3
	Nonenrolled	11.8	13.8	29.1	52.8

5.1.5 Effect of TRICARE on Family Utilization Rates

The effect of TRICARE on deductibles and copayments is a function of health care services utilization. Table 5-3 compares average purchased-care utilization rates per family in FY 1994 with those in FY 1998. For most beneficiary groups, outpatient visits increased, especially for those with a civilian PCM. The number of prescriptions (drugs)

[59] Although TRICARE and private health insurance can be complementary plans, most beneficiaries use one or the other.

[60] For TRICARE eligibles, other private health insurance includes HMO participants. For Medicare eligibles, HMO participants are separately grouped because their premium costs are much lower.

[61] The FY 1994 baseline was derived by subtracting the net effect of TRICARE (the percentage who added insurance minus the percentage who dropped it) from the FY 1998 coverage level.

increased for all beneficiary groups. Again, those with a civilian PCM had the greatest increase. Hospital bed-days declined for all beneficiary groups.

Table 5-3. Average Family Purchased-Care Utilization Rates Under TRICARE in FY 1994 and FY 1998

Beneficiary Group	Enrollment Status	FY 1994			FY 1998		
		Visits	Drugs	Bed-Days	Visits	Drugs	Bed-Days
Active-Duty Family Members, E1–E4	Military PCM	3.11	0.37	0.93	3.66	0.57	0.75
	Civilian PCM	4.40	1.69	0.53	10.59	4.91	0.09
	Nonenrolled	3.51	0.62	0.63	2.94	1.06	0.11
Active-Duty Family Members, E5 and Above	Military PCM	4.64	0.73	0.58	4.13	0.78	0.40
	Civilian PCM	7.40	3.29	0.28	12.15	8.47	0.09
	Nonenrolled	6.19	1.84	0.38	7.04	3.92	0.07
Retirees and Family Members	Military PCM	3.67	0.70	0.59	4.85	1.34	0.50
	Civilian PCM	7.65	6.36	0.17	15.23	15.41	0.14
	Nonenrolled	4.54	3.13	0.26	4.56	4.55	0.07

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5.1.6 Computation of Total Out-of-Pocket Expenses

Out-of-pocket expenses (OPE) are the sum of deductibles and copayments (net of reimbursements) plus insurance premiums. For greater accuracy, OPE calculations are made for each family (i.e., group of eligibles) and then aggregated by sponsor type and enrollment status.

Families were classified by their FY1998 enrollment status:

- At least one family member enrolled in Prime with a military PCM,
- At least one family member enrolled in Prime with a civilian PCM, or
- No family members enrolled in Prime.

Grouping families by enrollment status is important because this affects deductibles, copayments, enrollment fees, and supplemental insurance premium costs.[62]

Families were further classified by sponsor's status:

- Active-duty enlisted, paygrade E4 or below;
- Active-duty enlisted, paygrade E5 or above, or active-duty warrant or commissioned officer; or
- Eligible retiree family.

This distinction is important because deductibles are a function of sponsor type, and supplemental insurance policy costs differ greatly for active duty versus retiree families.

The purchased-care claims for FY 1994 and FY 1998 identify how much the government paid for each beneficiary. They also identify the amount billed by health care

[62] Supplemental insurance premiums were based on the cost of a CHAMPUS Supplemental policy in FY 1994, adjusted for inflation. In FY 1998, premiums were based on a Prime Supplemental policy for families who enrolled, and on a Standard Supplemental policy for families who did not enroll

providers, allowable charges, and the amount paid by other health insurance (OHI). These data were used to estimate deductibles and copayments owed by beneficiaries (i.e., the beneficiary's obligation for the *balance* of the allowable charge net of OHI reimbursements).

Legally, other health insurance must pay before TRICARE reimburses any unpaid residual. If the beneficiary has a TRICARE supplemental policy, TRICARE pays first, and the supplemental policy reimburses the policyholder directly. However, the purchased-care claims records do not include the amounts paid by TRICARE supplemental policies.

Only about 37 percent of families with OHI bother to file for reimbursements from TRICARE as a second payer. Those that file have a relatively large claim amount—which is probably why they file. To obtain an estimate of deductibles and copayment expenses for families without OHI, families with OHI reimbursements were dropped from the sample. An estimate of the average deductibles and copayments paid by a typical family, with and without a TRICARE supplemental policy, was obtained by summing deductibles and copayments for purchased-care claims (inpatient, outpatient, and prescription) for all eligible family members.

It is assumed that a TRICARE supplemental insurance policy covers all expenses above the plan deductible, which was set equal to the deductible for an individual times the number of eligibles in the family. Compared to TRICARE, families with OHI have a higher deductible (e.g., $243 per individual) and lower copayments for hospital charges. Data on their out-of-pocket expenses are not available. It was assumed that OHI pays all expenses above the deductible for the family, also set equal to the (higher) deductible for an individual times the number of eligibles in the family.

The above approach understates deductibles and copayments of TRICARE eligibles for two reasons. First, some families who use purchased care do not accumulate enough medical bills to meet their annual deductible and do not file a claim. Although purchased-care providers have been required to file claims directly since FY1993, the requirement was never enforced and was abandoned a few years ago.

Second, families with OHI who do not file have zero values for purchased care claims. The result is an understatement of the average deductibles and copayments for users of the system. To correct for this bias, the estimate of average deductible and copayment expenses was adjusted for the percent of TRICARE eligibles with OHI who do not file for reimbursements.

The values of deductibles and copayments in FY1994 were adjusted for inflation between 1994 and 1998 to estimate expenses in FY1998. Separate price indexes were used for inpatient, outpatient, and prescription expenses: for inpatient expenses the HCFA Hospital Input Price Index (11.3 percent increase between 1994 and 1998); for outpatient expenses, the Medicare Economic Index (9.2 percent increase); and for drugs, the Consumer Price Index for Prescription Drugs (12.9 percent increase).

5.1.7 *Effect of TRICARE On Out-of-Pocket Expenses of TRICARE-Eligible Families*

Table 5-4 and Figure 5-1 display the estimated average out-of-pocket expenses per family under CHAMPUS in FY 1994 (adjusted for inflation through FY 1998) and under TRICARE in FY 1998, by sponsor type and enrollment status.

Table 5-4. Effect of TRICARE on Family Out-of-Pocket Expenses for TRICARE Eligibles

Beneficiary Group	Enrollment Status	Deductibles and Copayments		Enrollment Fees		Other Insurance		Total	
		FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
Active-Duty Family Members, E1–E4	Military PCM	$48	$50	$0	$0	$56	$37	$104	$87
	Civilian PCM	68	147	0	0	102	51	170	198
	Nonenrolled	76	64	0	0	89	123	165	187
Active-Duty Family Members, E5 and Above	Military PCM	86	63	0	0	90	85	176	148
	Civilian PCM	132	224	0	0	128	119	260	343
	Nonenrolled	169	197	0	0	156	245	325	442
Retirees and Family Members	Military PCM	143	87	0	430	323	185	466	702
	Civilian PCM	281	352	0	425	273	158	554	935
	Nonenrolled	357	359	0	0	598	850	955	1,209

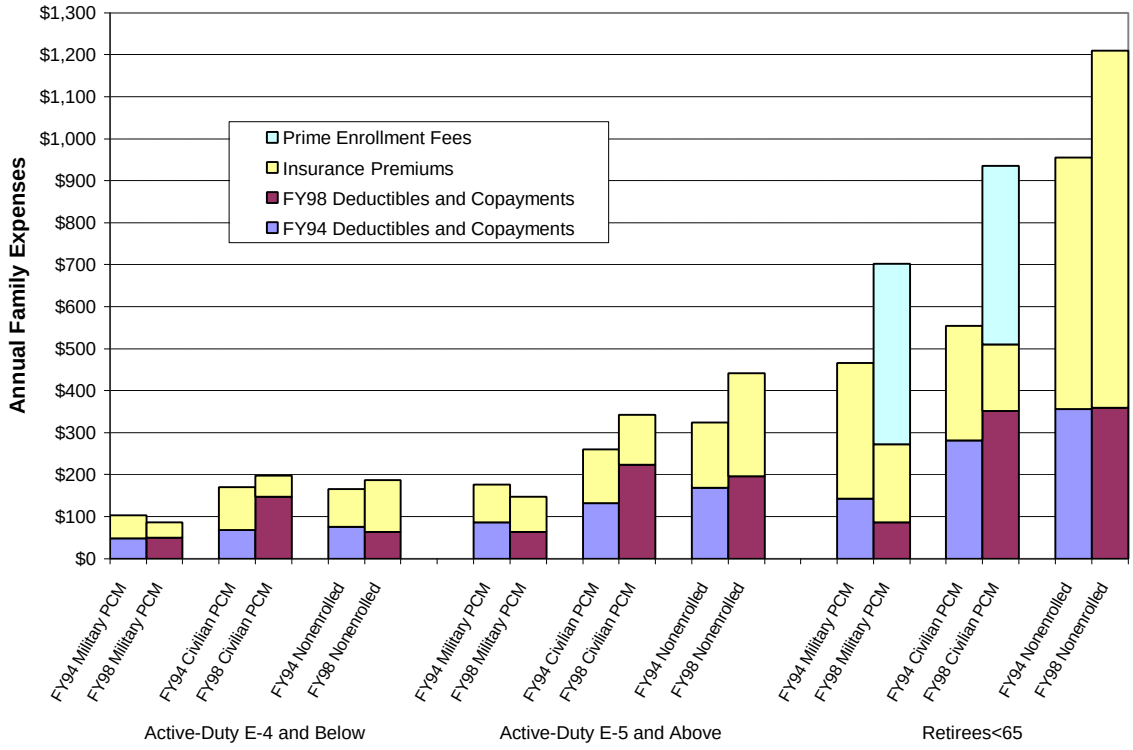

Figure 5-1. Total Family Out-of-Pocket Expenses

For all beneficiary groups, out-of-pocket expenses in FY 1998 were lowest for those with a military PCM. Except for junior-enlisted families, expenses were highest for those who did not enroll. Expenses vary from a low of $87 for junior-enlisted families with a military PCM, to $1,209 for retiree families who do not enroll. Because of higher utilization rates, junior-enlisted families with a civilian PCM had slightly higher expenses than junior-enlisted families who do not enroll.

Most active-duty families enrolled in Prime had lower insurance expenses ($37–$119) compared with those who do not to enroll ($123–$245). Retirees who did not enroll in Prime spent the most for insurance—$850.

Unlike active-duty families, retiree families pay enrollment fees. For those with a military PCM the average fee was $430 per family. This accounts for 61 percent of their out-of-pocket expenses. For retirees with a civilian PCM, the average fee was $425—45 percent of expenses.

Table 5-5 reports the change in expense by cost category in FY 1998 versus the FY 1994 baseline. For active-duty families, expenses declined slightly for those with a military PCM, and increased somewhat (from $28 for junior-enlisted families to $83 for senior enlisted families) for those with a civilian PCM. For active-duty families with a civilian PCM, expenses increased because they used more health care services.

Table 5-5. Changes in Family Out-of-Pocket Expenses Due to TRICARE

Beneficiary Group	Enrollment Status (Percent in Group)	Deductibles and Copays	Enrollment Fees	Other Insurance	Total
Active–Duty Family Members, E1–E4	Military PCM (63%)	$2	$0	–$19	–$17
	Civilian PCM (7%)	79	0	–51	28
	Nonenrolled (30%)	–12	0	34	22
Active–Duty Family Members, E5 and Above	Military PCM (67%)	–23	0	–5	–28
	Civilian PCM (10%)	92	0	–9	83
	Nonenrolled (23%)	28	0	89	117
Retirees and Family Members	Military PCM (16%)	–56	430	–138	236
	Civilian PCM (8%)	71	425	–115	381
	Nonenrolled (76%)	2	0	252	254

For active-duty families who did not enroll in Prime, out-of-pocket expenses increased $22 for junior-enlisted families and $117 for senior-enlisted/officer families. The increase in expenses for active-duty families was due to higher insurance costs.

For retiree families enrolled with a military PCM, out-of-pocket costs increased $236 under TRICARE. Higher enrollment fees more than offset the decline in deductibles, copayments, and insurance expenses for those families. Even without the enrollment fee, costs under TRICARE were only slightly lower for retiree families enrolled with a civilian PCM. The reason for this seemingly anomalous result is that families with a civilian PCM have much higher utilization under TRICARE (recall the discussion of Table 5-3), thereby increasing their expenses. With the addition of the enrollment fee, out-of-pocket costs for families with a civilian PCM increased by $381. Out-of-pocket expenses increased by $254 for nonenrolled retiree families because of a $252 increase in insurance expenses.

5.2 Cost to Medicare-Eligible Beneficiaries

5.2.1 Deductibles and Copayments Under Medicare

Medicare provides basic health care benefits for hospital services (Part A) and medical services (Part B). Part A covers inpatient hospital services, short-term care in skilled nursing facilities, post-institutional home health care, and hospice care. Part B covers physician services, outpatient hospital services, home health care not covered by Part A, and a variety of other medical services such as diagnostic tests, durable medical equipment, and ambulance. Individuals eligible for Social Security are eligible for Medicare when they reach age 65.

However most Medicare benefits require cost sharing. For Part A services in 1998, there was a $764 deductible per inpatient episode, and substantial coinsurance expenses after 60 days in the hospital. For Part B services, there was a $100 deductible and 20 percent coinsurance for most services. Medicare coverage is limited: there is no catastrophic cap, drugs are not covered, and Medicare will not pay charges that are greater than what it considers reasonable and necessary. Because of cost sharing, Medicare enrollees incur substantial expenses for the services covered by the program. According to HCFA, the average Medicare cost-sharing liability per Medicare enrollee in 1997 was $846.[63]

5.2.2 Medicare Supplemental Insurance

To cover out-of-pocket expenses and the financial risk of a severe illness, many Medicare enrollees purchase a Medicare supplemental insurance or "Medigap" policy. Ten standardized plans are now available—Plans A through J.[64] All ten plans include coverage for Part A coinsurance and 365 days of hospital care after Medicare benefits end. They also cover Part B coinsurance and the first three pints of blood each year. Plan A offers only this basic coverage. The other plans also cover the Part A deductible. Plans C, F and J cover the Part B deductible and other expenses. Plans H, I and J provide limited coverage for drugs. Table 5-6 summarizes the benefits provided by these policies.

Despite efforts to standardize Medigap policies, differences in underwriting policies cause the premiums to vary. Some Medigap policies are "guaranteed-issue;" others may require a health examination and deny coverage due to a preexisting condition. Some base the premium on the current age of the policy holder, others on the age of the policy holder when the policy was first issued, with an adjustment for inflation. For others, the premium is a function of the location and not the age of the policy holder.

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[63] Health Care Financing Administration,*Health Care Financing Review*, "Medicare and Medicaid Statistical Supplement, 1999," p. 126. Data not yet available for 1998 when this report was prepared.

[64] Prior to January 1, 1992, non-standardized policies were sold and many of these policies are still in force. However, if TRICARE causes a family to purchase a Medicare supplemental policy, it will necessarily have to be a standardized or Medigap policy.

Table 5-6. Medicare Supplemental Insurance Policies

Medigap Benefits	Policy Type									
	A	B	C	D	E	F	G	H[a]	I[a]	J[b]
Basic Benefits	√	√	√	√	√	√	√	√	√	√
Part A: Inpatient Hospital Deductible		√	√	√	√	√	√	√	√	√
Part A: Skilled Nursing Facility Coinsurance			√	√	√	√	√	√	√	√
Part B: Deductible			√			√				√
Foreign Travel Emergency			√	√	√	√	√	√	√	√
At-Home Recovery				√			√		√	√
Part B: Excess Charges						100%	80%		100%	100%
Preventive Care					√					√
Prescription Drugs								√ Basic Coverage	√ Basic Coverage	√ Extended Coverage

Source: "Medicare Supplemental Insurance (Medigap) Policies and Protections," HCFA, July 1999, page 3.

[a] After a $250 per year deductible, Plans H and I pay 50 percent of prescription drug costs up to a maximum of $1,250 per year.

[b] After a $250 per year deductible, Plan J pays 50 percent of prescription drug costs up to a maximum of $3,000 per year.

The National Association of Insurance Commissioners (NAIC) collects data on supplemental insurance policies: on premiums earned and the number of covered lives by company and policy type. These data were used to estimate the average insurance premium, by state, for standard Medigap policies, as shown inTable 5-7. Nationwide, the average annual premium for a standard Medigap policy was $1,137 in 1998. The premium varies by state because of regional differences in medical costs and underwriting policies.[65]

[65] NAIC's data indicate that, nationwide, the average cost of non-standardized polices was similar to that of standardized policies. Because of differences in policy features, there was greater variation in average premiums at the state level.

Table 5-7. Average Annual Premiums for a Medigap Policy and a Medicare HMO for an Individual by State in 1998

State	Medigap[a]	Medicare HMO[b]	State	Medigap	Medicare HMO
AK	$1,128	n/a	MT	$1,123	n/a
AL	1,131	0	NC	1,131	401
AR	1,083	215	ND	1,009	468
AZ	1,442	62	NE	1,092	0
CA	1,450	146	NH	1,128	0
CO	1,156	292	NJ	1,287	294
CT	1,279	110	NM	1,074	34
DC	1,353	n/a	NV	1,298	95
DE	1,106	n/a	NY	1,390	43
FL	1,502	20	OH	1,312	71
GA	1,276	46	OK	1,229	140
HI	956	828	OR	1,099	504
IA	1,049	n/a	PA	765	81
ID	1,273	852	RI	1,392	0
IL	1,204	14	SC	1,117	540
IN	1,149	23	SD	1,066	n/a
KS	1,205	0	TN	1,185	0
KY	1,147	120	TX	1,244	111
LA	1,466	0	UT	925	n/a
MA	1,184	242	VA	1,129	244
MD	793	285	VT	1,045	n/a
ME	1,035	780	WA	1,823	458
MI	983	123	WI	1,047	26
MN	1,193	769	WV	1,154	n/a
MO	1,111	37	WY	1,105	n/a
MS	1,244	n/a	All	1,137	211

[a] Data from the National Association of Insurance Commissioners processed by IDA to obtain state-level estimates of average premiums.

[b] Data from HCFA processed by IDA to obtain state-level estimates of average premiums.

The NAIC data were also used to estimate the distribution of Medigap policies, which is displayed in Table 5-8. The most popular policy was Plan F (33.1 percent) followed by Plan C (23.7 percent). These accounted for 56.8 percent of the Standard Medigap policies in force. Only 5.7 percent of policyholders purchased a plan that covered drugs (H, I, or J). 14.3 percent purchased the most basic Plan A, which does not cover the Part A deductible ($764). Consequently, 85.7 of those with a Medigap policy did not have to pay the Part A deductible. Because they purchased Plans C, F or J, 58.7 percent did not have to pay the Part B deductible.

Table 5-8. Distribution of Standard Medigap Policies in 1998

Plan	Percent of Policies
A	14.3
B	15.5
C	23.7
D	5.3
E	1.1
F	33.1
G	1.4
H	2.2
I	1.6
J	1.9

Studies have shown that the demand for Medigap insurance is a function of economic factors (particularly income or wealth), socio-demographic factors and health status. Perhaps the most important determinant is economic: families with above average income/wealth buy insurance; relatively poor families do not.[66]

5.2.3 Other Private Health Insurance

5.2.3.1 Employer-Sponsored Insurance for Retirees and Active Workers

According to a Hewitt and Associates survey for the Kaiser Family Foundation, most employers with a thousand or more employees offered retiree health benefits in 1996.[67] Retirees must meet minimum requirements for eligibility, e.g., age 55 and 10-15 years of service. According to Hewitt, about one-third of Medicare eligibles had health coverage from a current or former employer.[68] IDA estimates that about 20 percent of these were active employees.[69]

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[66] IDA is unaware of any studies that have analyzed the demand for insurance by military beneficiaries. For evidence from studies analyzing Medigap supplemental insurance for the entire Medicare population, see Susan L. Ettner, "Adverse Selection and the Purchase of Medigap Insurance by the Elderly," *Journal of Health Economics*, 16 (1997), pp. 543–562; Lee A. Lillard, Jeannette Rogowski, and Raynard Kington, "Long-Term Determinants of Supplemental Health Insurance Coverage in the Medicare Population," RAND, March 1996, DRU-1378-NIA; and Jessica A. Vistnes and Jessica S. Banthin, "The Demand for Medicare Supplemental Insurance Benefits: The Role of Attitudes Toward Medical care and Risk," *Inquiry* 34 (Winter 1997/98), pp. 311–324. Other studies have shown that health care utilization is a function of insurance coverage, i.e., those with insurance demand more services. See, for example, S. Christensen and J. Shenogle, "Effects of Supplemental Coverage on Use of Services by Medicare Enrollees," *Health Care Financing Review*, Fall 1997.

[67] "Retiree Health Trends and Implications of Possible Medicare Reforms," Hewitt Associates, September 1997. Hewitt conducts a large survey of employers annually. It has been tracking salaried employee benefits since 1972.

[68] For (similar) 1999 estimates, see Kaiser Family Foundation, "Employer Health Benefits, 1999 Annual Survey," p. 118.

[69] IDA estimates that 6 to 7 percent of Medicare eligibles obtained coverage because they or their spouse were active employees. Assuming 33 percent of Medicare eligibles have employer-sponsored health insurance, then 20 percent of the total are covered because they are active employees. The 6 to 7 percent estimate is based on data from the Bureau of Labor Statistics on the labor force participation rate of older workers and the health benefit participation rate of full and part-time workers, and data on the marital status of the Medicare population.

Health benefits are similar for active and retired employees.[70] Therefore, the average deductible for retirees is also about $243 and the copayment rate is 20 percent. However, the plans include drug coverage, a major benefit for Medicare eligibles.[71]

Premiums are higher for retirees than for active workers. Medicare is the primary insurer for retirees, so the cost of a health policy to the employer is lower for a retiree than for an employee who is still working. However, retirees pay a greater share of the policy's cost. Based on Mercer/Foster Higgins surveys, the expected annual contribution for a retiree in 1998 was $850 for an individual policy and $1,575 for family coverage.[72] As noted earlier, for active employees the expected cost is $332 for an individual policy and $1,353 for family coverage. Assuming that 20 percent of Medicare eligibles are still working, the average cost of employer-sponsored coverage is $746 for an individual policy and $1,530 for family coverage. A summary of employer-sponsored insurance costs is presented in Table 5-9.

Table 5-9. Average Cost of Employer-Sponsored Health Insurance to Active and Retired Medicare-Eligible Employees in 1998

Policy Type	Active Employees (20%)[a]	Retired Employees (80%)[b]	Medicare Eligibles
Individual	$332	$850	$746
Family	1,353	1,575	1,530

[a] Estimated percentage of Medicare eligibles with employer-sponsored health insurance who are still active employees.
[b] Estimated percentage of Medicare eligibles with employer-sponsored health insurance who are retired.

5.2.3.2 Medicare Risk HMOs[73]

A "risk contract" HMO contracts with HCFA to provide Medicare benefits to beneficiaries enrolled in the HMO. Medicare prepays a monthly amount (the capitation) to the plan for the enrollee, regardless of his/her actual health care utilization. In return, the HMO provides the enrollee with all medically necessary Medicare-covered treatment.

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[70] Benefits depend on the design of the plan vis-à-vis Medicare. Most employers use the "Carve-out Method" which results in the same benefit for active and retired workers [Hewitt, p.16].

[71] Retiree utilization of prescription drugs is more than double that of active workers. Moreover, drug expenses have been increasing sharply. Because the drug benefit accounts for 40–60 percent of the health plan cost for retirees [Hewitt, p.22], the health policy premium in 1998 increased more rapidly for retirees (9.5 percent) than for active workers (3.7 percent).

[72] Data from Mercer/Foster Higgins surveys of employers in 1997 were obtained from the National Bipartisan Commission on the Future of Medicare website http://medicare.commission.gov/medicare/K-P-1499.html. Data to update the 1997 estimates to 1998 values were obtained in a fax directly from William M. Mercer, Inc.

[73] Information in this section is from the HCFA websites http://www.hcfa.gov/stats/monthly.htm and http://www.hcfa.gov/stats/geos.htm unless otherwise noted.

The program began in 1983; enrollments steadily increased during the 1990s, reaching 11 percent of all beneficiaries in the U.S. in December 1996.

Enrollment in a Risk HMO sharply reduces out-of-pocket expenses because the HMO covers most of the Medicare liability, i.e., the Medicare deductibles and copayments. The plan usually has its own small copayments for visits ($5–$10 per visit), but out-of-pocket expenses are relatively low. The typical plan goes beyond Medicare and offers limited drug coverage and preventive care not covered by Medicare.

Most Medicare Risk HMOs do not charge an enrollment premium to cover the basic benefits offered under Medicare Part A and Part B. However, the HMO enrollee must enroll in Medicare Part B and pay that premium to Medicare. In 1996, 65 percent of plans required no premium for enrollment, 19 percent charged less than $40 per month, and 16 percent charged more.

Although over 200 Risk HMO plans participate in Medicare, each is available only to beneficiaries in a specific area, e.g., a county or zip code. In June 1996, 63 percent of all Medicare beneficiaries lived in a zip code that was served by at least one risk plan. About half of all beneficiaries had access to two or more plans in their area. Risk HMOs are concentrated in urban areas and in three western states: in Arizona 34 percent of Medicare beneficiaries were enrolled in Medicare Risk HMOs as of December 1996; in California 35 percent were enrolled; and in Oregon 27 percent. The only eastern states where the risk HMO enrollment rate tops 10 percent are Florida (22 percent), Massachusetts (14 percent), Pennsylvania (16 percent), and Rhode island (12 percent). No plans are available in nine of the smaller states.

Earlier, Table 5-7 presented average HMO enrollment fees per state, based on data from HCFA on enrollments and fees by risk HMO contract and service area. The enrollment weighted average premium in 1998 was $211.20 ($17.60 per month). The average annual premium varies from a low of $0 (e.g., Alabama) to a high of $852 in Idaho. Data were not available in ten states because there was no plan (most cases) or HCFA did not collect data on the plan(s) in the state (exception).

5.2.4 Insurance Coverage Decisions

As mentioned earlier, the 1998 Health Care Survey of DoD Beneficiaries asked respondents about their insurance choices. Medicare eligibles chose to either (1) join a Medicare HMO; (2) purchase a Medigap policy; (3) purchase another health insurance policy through a current or former employer; (4) purchase both a Medigap policy and a policy from an employer; or (5) rely only on basic Medicare. Their actual choices in 1998 by TRICARE region are given in Table 5-10.

Slightly over 13 percent of Medicare-eligible families had only basic Medicare coverage in 1998. These beneficiaries have relatively low family incomes.[74] Most

[74] Supporting evidence is available from the 1997 Health Care Survey of DoD Beneficiaries, which collected relatively detailed information on the family incomes of military beneficiaries in 1996. The median family income of military retirees over age 65 was $31,350 in 1996; 14.1 percent had just basic Medicare in 1997 (close to the estimate of 13.4 percent from the 1998 survey). 17.5 percent of retirees over the age of 65 had a family income of $20,000 or less; of these 31.4 percent had just basic Medicare. Therefore, a retiree with a relatively low family income is more than twice as likely to have just basic Medicare.

Medicare-eligible military retirees are heavily insured. Almost 87 percent had a plan in addition to basic Medicare: 20.5 percent joined a Medicare HMO, 27.4 percent had just a Medigap policy; 28.9 had employer-sponsored private health insurance, and 9.9 percent had both a Medigap policy and OHI. Many chose to join a Medicare Risk HMO in Regions 9 and 10. This is expected because Regions 9 and 10 encompass California, which has a very high risk-HMO penetration rate.

Table 5-10. Insurance Choices Made by Medicare-Eligible Military Retirees in 1998

TRICARE Region	Medicare Risk HMO[a] (1)	Medigap (2)	OHI (3)	Medigap + OHI (4)	Basic Medicare (5)
3	12.9	36.4	29.4	8.5	12.8
4	6.1	36.8	33.9	16.4	6.8
6	17.8	30.1	16.4	15.8	19.8
7/8	21.7	25.2	33.4	9.8	9.9
9	44.0	19.7	18.5	7.0	10.9
10	45.7	17.2	23.3	6.6	7.3
11	30.4	17.1	25.8	8.5	18.2
12	28.8	23.8	22.9	6.7	17.8
All	20.5	27.4	28.9	9.9	13.4

[a] About 4 percent of Medicare eligibles enrolled in an HMO are in employer-sponsored plans rather than in a Risk Contract HMO (based on an analysis of HCFA data). These could not be identified in the 1998 Health Care Beneficiary Survey; they are included under Medicare Risk HMOs.

5.2.5 Effect of TRICARE on Insurance Coverage Decisions

The 1998 Health Care Survey also asked Medicare eligibles whether TRICARE had any effect on their insurance coverage decisions. As noted earlier, separate questions were asked about supplemental insurance and private health insurance coverage. The question on private insurance did not distinguish between employer-sponsored insurance and HMO enrollment. Table 5-11 shows that Medicare-eligible beneficiaries slightly increased both supplemental (3.1 percent) and private insurance coverage (4.1 percent) under TRICARE.

Table 5-11. Effect of TRICARE on Medicare Supplemental and Private Insurance Coverage

	Net Increase Due to TRICARE	
TRICARE Region	Medicare Supplemental Insurance	Private Health Insurance
3	4.3%	5.5%
4	3.9	5.0
6	0.7	3.2
7/8	4.0	3.5
9	0.6	2.3
10	5.6	6.5
11	1.4	2.0
12	4.9	7.1
All	3.1	4.1

As for TRICARE eligibles, the FY 1994 baseline was derived by subtracting the net effect of TRICARE (the percentage who added insurance minus the percentage who dropped it) from the FY 1998 coverage level. It is assumed those who added insurance had just basic Medicare (Choice 5). The change in supplemental coverage was distributed between Choices 2 and 4, in proportion to their relative frequencies in 1998. Similarly, the change in private insurance coverage was distributed among Choices 1, 3 and 4. The FY 1994 baseline is given in Table 5-12. Under the baseline, more families would have relied on basic Medicare, 19.8 percent instead of 13.4 percent. The percentages selecting the other choices would have been 1 to 2 points lower.

Table 5-12. Baseline Insurance Choices Made by Medicare-Eligible Military Retirees

TRICARE Region	Medicare Risk HMO (1)	Medigap (2)	OHI (3)	Medigap + OHI (4)	Basic Medicare (5)
3	11.5	32.9	26.2	7.6	21.8
4	5.6	34.1	30.9	14.9	14.5
6	16.7	29.6	15.4	14.8	23.5
7/8	20.5	22.3	31.6	9.3	16.3
9	42.5	19.3	17.9	6.8	13.6
10	41.8	13.2	21.3	6.0	17.8
11	29.5	16.2	25.0	8.2	21.1
12	25.3	20.0	20.1	5.9	28.7
All	19.1	25.1	26.9	9.2	19.8

5.2.6 Effect of TRICARE on Medicare Utilization Rates

Medicare out-of-pocket expenses are a function of Medicare utilization expenditures. These are a function of regional differences in health status and costs. Total Medicare expenditures per eligible for Part A and Part B services vary by TRICARE Region, as shown in Table 5-13. Both Part A and Part B expenditures per eligible are lowest in Region 12 and greatest in Region 9. The difference in total Medicare expenditures per eligible between the two regions is almost $3,000.

Table 5-13. Average Annual Medicare Expenditures per Medicare Eligible by TRICARE Region in FY 1998

TRICARE Region	Part A	Part B	Total
3	$1,744	$2,428	$4,172
4	1,830	2,580	4,410
6	2,074	2,868	4,942
7/8	1,731	2,366	4,096
9	2,483	3,490	5,973
10	2,179	2,873	5,052
11	1,656	2,261	3,917
12	1,324	1,701	3,025

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Medicare expenditures also vary by age, sex, and whether the individual lives in a catchment area, as shown in Table 5-14. Expenditures are greater for eligibles who are

over 74 years old; given age, expenditures are greater for males; given age and sex, expenditures are greater for those not living in a catchment area.

Table 5-14. Average Total Medicare Expenditures per Medicare Eligible by Age, Sex, and In-Catchment Status

Age	Sex	Catchment	Part A	Part B	Total
< 75	Female	In	$1,235	$1,700	$2,935
	Female	Out	1,656	2,288	3,944
	Male	In	1,574	2,115	3,689
	Male	Out	1,942	2,699	4,641
≥ 75	Female	In	1,793	2,471	4,264
	Female	Out	2,537	3,577	6,114
	Male	In	2,263	3,083	5,346
	Male	Out	2,772	3,808	6,580

5.2.7 Computation of Total Out-of-Pocket Expenses

The Medicare cost-sharing liability per eligible was estimated by region, age, sex and in-catchment status (72 groups) in 1994 for Part A and Part B expenses. The liability was adjusted for inflation using theHCFA Hospital Input Price Index for Part A expenses, and the Medicare Economic Index for Part B expenses. Using the FY 1994 family sample, expenses were aggregated to obtain family-level totals, and averaged to obtain estimates for the 72 groups. With the exception of the inflation adjustment, the same procedure was followed to estimate Medicare expenses per family of Medicare eligibles in 1998. Insurance premiums per family for each insurance choice were estimated, taking into account family size and residence/state.

Estimates of deductibles and copayments by region are given inTable 5-15, which shows that TRICARE increased the Medicare cost-sharing liability by $162. It should be pointed out, however, that this was the increase in expenses only for those who continued to rely solely on basic Medicare in 1998, i.e., Choice 5.

Table 5-15. Average Out-of Pocket Expenses per Medicare-Eligible Family

TRICARE Region	Deductibles and Copays[a] FY 1994 Baseline	Deductibles and Copays[a] FY 1998	OHI per Family	HMO Premium per Family	Medigap Premium per Family	Eligibles per Family
3	$799	$888	$1,187	$141	$1,357	1.27
4	796	993	1,183	9	1,303	1.29
6	713	952	1,202	108	1,254	1.27
7/8	594	759	1,168	204	1,227	1.25
9	948	940	1,193	144	1,450	1.27
10	682	845	1,177	144	1,450	1.18
11	526	779	1,175	470	1,606	1.31
12	453	575	1,224	828	956	1.25
All	713	875	1,186	170	1,321	1.27

[a] Estimates of deductibles and copayments for those with basic Medicare and for those with a Medigap policy before insurance reimbursements.

About 6 percent of families purchased insurance and did not incur any deductible and copayment expenses. These families increased their insurance coverage beyond basic Medicare because of TRICARE. Except for those who enrolled in a Medicare HMO, their expenses increased by more than $162. To calculate the net effect of TRICARE, it is necessary to first estimate the cost of insurance premiums for families for each insurance choice. These are also given, by region, in Table 5-15: the estimates take into account family size, and state-level differences in Medigap and HMO premiums. The average premium per family for a Medicare Risk HMO was $170; a Medigap policy cost $1,321; OHI cost $1,186; and both Medigap and OHI cost $2,507. The average number of Medicare eligibles per family was 1.27.

Total out-of-pocket expenses equal the sum of expected deductibles, copayments and insurance expenses for each choice. The net effect of TRICARE is the change in expected expenses in 1998 compared to the 1994 baseline. To calculate this, it is necessary to estimate deductibles and copayments for insurance choices other than just basic Medicare. Direct estimates are not available for deductibles and copayments for the other choices. It is assumed that deductibles and copayments equal the deductible per individual under each policy times the number of eligibles per family. The implications of this assumption are shown in Table 5-16.

Table 5-16. Assumed Net Deductibles and Copayments for Medicare-Eligible Families by Insurance Choice and TRICARE Region in 1998

TRICARE Region	Medicare Risk HMO	Medigap	OHI	Medigap + OHI	Basic Medicare
3	$0	$192	$309	$0	$888
4	0	195	313	0	993
6	0	192	309	0	952
7/8	0	190	305	0	759
9	0	192	309	0	940
10	0	178	287	0	845
11	0	198	318	0	779
12	0	189	304	0	575
All	0	191	308	0	875

In a risk HMO (Choice 1), deductibles are zero and copayments are minimal. It is assumed that total deductibles and copayments are $0. Taking into account the distribution of Medigap policies, the expected deductible per eligible is $151. This quantity times 1.27 yields $191 per family. The deductible per eligible is $243 for OHI; this quantity times 1.27 yields $308. Since under Choice 4, the policy holder effectively has two policies plus Medicare, it is assumed deductibles and copayments are $0.

5.2.8 Effect of TRICARE On Out-of-Pocket Expenses of Medicare-Eligible Families

Table 5-17 gives weighted-average expenses for the 1994 baseline and all Medicare-eligible families in 1998, as well as the change in expected expenses. TRICARE increased the deductibles and copayments of families with just basic Medicare coverage by inducing some of them to increase their insurance coverage. But only 13.4 percent of Medicare-eligible families have just basic coverage, and only 6 to 7 percent more were

induced by TRICARE to increase their insurance coverage. Consequently, TRICARE has only a small effect ($55) on the average out-of-pocket expenses for a family of Medicare eligibles.

Table 5-17. Effect of TRICARE on Out-of-Pocket Costs of Medicare-Eligible Families

Source	FY 1994	FY 1998	Difference
Deductibles and Copays	$268	$249	–$19
Insurance	937	1,011	74
Total	1,205	1,260	55

5.3 Summary

Figure 5-2 displays the average effect of TRICARE on the out-of-pocket expenses of Medicare-eligible families alongside those of TRICARE-eligible families. Under TRICARE, active-duty families with a military PCM saw their out-of-pocket expenses decline slightly, whereas other active-duty families saw their expenses increase. However, because 66 percent of active-duty families (excluding those with a single active-duty service member) enrolled in Prime with a military PCM in FY1998, most active-duty families experienced a decline in their out-of-pocket expenses. All retiree family groups experienced an increase in their out-of-pocket expenses of between $236 and $381, due to increases in enrollment fees and insurance expenses.

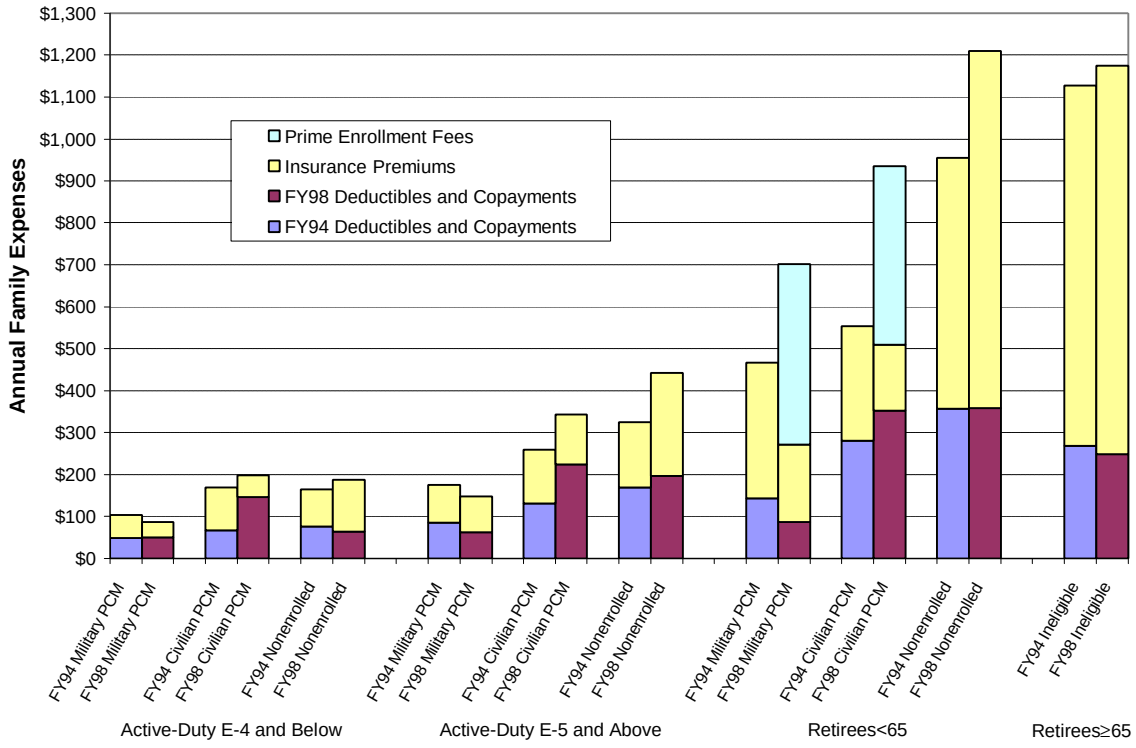

Figure 5-2. Total Family Out-of-Pocket Expenses (Including Senior Retirees)

TRICARE increased out-of-pocket expenses for Medicare-eligible beneficiaries by $55 on average. The vast majority (82 percent) of Medicare-eligible families already had supplementary insurance coverage before the advent of TRICARE. Although many were "squeezed out" of the MTF, their out-of-pocket costs were relatively unaffected because they had recourse to third-party sources of payment. Consequently, those Medicare-eligible families with only basic Medicare coverage (those least able to afford additional insurance) bore the brunt of the increase in costs ($283 per family).

APPENDICES

APPENDIX A: DISTRIBUTION OF SUBPOPULATIONS IN THE 1994 AND 1998 SAMPLES

Table A-1 shows estimates of the distribution of the 1994 and 1998 subpopulations by source of care for the seven regions examined in the study. The proportions, p_i, were weighted to reflect the population distribution using the relationship:

$$p_i = n_i \times w_i / Mean(w_i),$$

where n_i is the number of individuals in the sample survey for a given year in a given region in a particular subpopulation, w_i is the sampling weight (N_i/n_i), and N_i is the number of people in the eligible population for a given year and region in a particular subpopulation.

Table A-1. Distribution of Subpopulations in the 1994 and 1998 Samples (Proportion With Particular Source of Care Within Region)

Region	Military Status (Source of Care)	FY94	FY98
3	Active Duty (All)	22	20
	Non-Active Duty (Prime)	14	27
	Non-Active Duty (Civilian Care Only)	35	39
	Non-Active Duty (Other Nonenrolled)	29	14
	Total	100	100
4	Active Duty (All)	22	19
	Non-Active Duty (Prime)	15	26
	Non-Active Duty (Civilian Care Only)	37	41
	Non-Active Duty (Other Nonenrolled)	26	15
	Total	100	100
6	Active Duty (All)	23	22
	Non-Active Duty (Prime)	16	29
	Non-Active Duty (Civilian Care Only)	32	34
	Non-Active Duty (Other Nonenrolled)	29	15
	Total	100	100
7/8	Active Duty (All)	25	21
	Non-Active Duty (Prime)	15	29
	Non-Active Duty (Civilian Care Only)	29	36
	Non-Active Duty (Other Nonenrolled)	31	14
	Total	100	100
9	Active Duty (All)	32	31
	Non-Active Duty (Prime)	17	26
	Non-Active Duty (Civilian Care Only)	28	28
	Non-Active Duty (Other Nonenrolled)	23	16
	Total	100	100

Continued on next page

Table A-1—*Continued*

Region	Military Status (Source of Care)	FY94	FY98
10	Active Duty (All)	21	13
	Non-Active Duty (Prime)	21	29
	Non-Active Duty (Civilian Care Only)	35	44
	Non-Active Duty (Other Nonenrolled)	24	14
	Total	100	100
11	Active Duty (All)	21	21
	Non-Active Duty (Prime)	20	32
	Non-Active Duty (Civilian Care Only)	36	35
	Non-Active Duty (Other Nonenrolled)	23	12
	Total	100	100
12	Active Duty (All)	45	46
	Non-Active Duty (Prime)	17	31
	Non-Active Duty (Civilian Care Only)	11	15
	Non-Active Duty (Other Nonenrolled)	27	8
	Total	100	100

APPENDIX B: REGIONAL DEMOGRAPHICS (MEANS OF CONTROL VARIABLES IN THE 1998 POPULATION)

Table B-1 shows mean values for the demographic variables used as "controls" in the regression analyses to estimate changes in outcomes. The data are broken down by TRICARE region and military status/source of care.

Table B-1. Mean Values for Demographic Variables (Region by Subpopulation)

	Region 3 / Military Status (Source of Care)			
Variable	Active Duty (All)	Non-Active Duty (Prime)	Non-Active Duty (Civilian Care Only)	Non-Active Duty (Other Nonenrolled)
Married	0.73	0.86	0.83	0.78
Male	0.85	0.35	0.49	0.61
Age (years)	33.02	48.20	60.36	56.06
SF12 mental health scale	51.80	51.89	53.33	52.16
SF12 physical health scale	51.54	47.87	45.10	45.10
Less than 45 minutes to provider	0.83	0.74	0.89	0.76
Hispanic	0.07	0.05	0.02	0.06
African American	0.21	0.16	0.07	0.11
High school education	0.72	0.72	0.65	0.72
Four or more years college education	0.27	0.22	0.30	0.22
Other insurance	0.20	0.39	0.88	0.67
Private insurance	0.07	0.17	0.39	0.22
In catchment	0.92	0.73	0.39	0.64

	Region 4 / Military Status (Source of Care)			
Variable	Active Duty (All)	Non-Active Duty (Prime)	Non-Active Duty (Civilian Care Only)	Non-Active Duty (Other Nonenrolled)
Married	0.67	0.85	0.82	0.75
Male	0.81	0.35	0.47	0.50
Age (years)	33.49	47.68	59.38	55.88
SF12 mental health scale	52.08	52.10	53.52	53.97
SF12 physical health scale	52.39	47.68	44.79	45.20
Less than 45 minutes to provider	0.81	0.78	0.85	0.79
Hispanic	0.06	0.02	0.01	0.01
African American	0.14	0.11	0.04	0.07
High school education	0.63	0.70	0.66	0.65
Four or more years college education	0.37	0.24	0.29	0.31
Other insurance	0.18	0.41	0.91	0.73
Private insurance	0.06	0.16	0.42	0.26
In catchment	0.86	0.70	0.43	0.61

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Table B-1—*Continued*

Variable	Region 6 / Military Status (Source of Care)			
	Active Duty (All)	Non-Active Duty (Prime)	Non-Active Duty (Civilian Care Only)	Non-Active Duty (Other Nonenrolled)
Married	0.69	0.86	0.83	0.77
Male	0.79	0.34	0.52	0.49
Age (years)	32.24	47.72	59.08	56.34
SF12 mental health scale	51.52	51.51	53.68	51.90
SF12 physical health scale	51.65	47.47	45.78	44.33
Less than 45 minutes to provider	0.89	0.80	0.84	0.78
Hispanic	0.10	0.09	0.04	0.11
African American	0.20	0.11	0.04	0.11
High school education	0.66	0.70	0.64	0.74
Four or more years college education	0.34	0.24	0.30	0.22
Other insurance	0.18	0.33	0.90	0.72
Private insurance	0.05	0.12	0.48	0.31
In catchment	0.93	0.76	0.33	0.59

Variable	Region 7/8 / Military Status (Source of Care)			
	Active Duty (All)	Non-Active Duty (Prime)	Non-Active Duty (Civilian Care Only)	Non-Active Duty (Other Nonenrolled)
Married	0.73	0.87	0.82	0.79
Male	0.82	0.36	0.51	0.49
Age (years)	32.64	47.08	59.53	57.18
SF12 mental health scale	52.32	52.11	53.52	52.72
SF12 physical health scale	51.83	47.39	45.64	44.70
Less than 45 minutes to provider	0.87	0.80	0.84	0.81
Hispanic	0.07	0.06	0.04	0.05
African American	0.12	0.07	0.03	0.05
High school education	0.66	0.71	0.62	0.70
Four or more years college education	0.34	0.24	0.34	0.23
Other insurance	0.19	0.38	0.88	0.76
Private insurance	0.06	0.15	0.43	0.27
In catchment	0.90	0.80	0.48	0.62

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Table B-1—*Continued*

Variable	Region 9 / Military Status (Source of Care)			
	Active Duty (All)	Non-Active Duty (Prime)	Non-Active Duty (Civilian Care Only)	Non-Active Duty (Other Nonenrolled)
Married	0.64	0.86	0.75	0.80
Male	0.90	0.31	0.53	0.42
Age (years)	30.63	45.18	63.29	52.28
SF12 mental health scale	51.41	51.96	54.57	52.26
SF12 physical health scale	52.89	49.45	45.67	47.03
Less than 45 minutes to provider	0.86	0.84	0.91	0.80
Hispanic	0.14	0.11	0.04	0.03
African American	0.12	0.08	0.06	0.06
High school education	0.75	0.70	0.62	0.71
Four or more years college education	0.25	0.24	0.34	0.23
Other insurance	0.24	0.31	0.92	0.58
Private insurance	0.08	0.13	0.42	0.24
In catchment	0.94	0.77	0.56	0.84

Variable	Region 10 / Military Status (Source of Care)			
	Active Duty (All)	Non-Active Duty (Prime)	Non-Active Duty (Civilian Care Only)	Non-Active Duty (Other Nonenrolled)
Married	0.69	0.78	0.83	0.73
Male	0.86	0.41	0.48	0.56
Age (years)	31.39	50.55	63.61	58.87
SF12 mental health scale	51.29	51.56	54.85	52.48
SF12 physical health scale	52.71	47.27	45.89	45.34
Less than 45 minutes to provider	0.88	0.79	0.88	0.67
Hispanic	0.11	0.05	0.04	0.04
African American	0.07	0.09	0.04	0.10
High school education	0.71	0.70	0.60	0.69
Four or more years college education	0.29	0.24	0.35	0.27
Other insurance	0.21	0.35	0.94	0.74
Private insurance	0.13	0.14	0.43	0.25
In catchment	0.91	0.67	0.51	0.57

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Table B-1—*Continued*

Variable	Region 11 / Military Status (Source of Care)			
	Active Duty (All)	Non-Active Duty (Prime)	Non-Active Duty (Civilian Care Only)	Non-Active Duty (Other Nonenrolled)
Married	0.71	0.86	0.83	0.79
Male	0.87	0.38	0.53	0.46
Age (years)	31.50	48.77	60.67	53.40
SF12 mental health scale	50.69	52.09	53.50	51.75
SF12 physical health scale	51.75	46.88	46.64	46.10
Less than 45 minutes to provider	0.87	0.78	0.84	0.74
Hispanic	0.05	0.04	0.02	0.02
African American	0.08	0.05	0.01	0.02
High school education	0.73	0.68	0.66	0.66
Four or more years college education	0.27	0.28	0.30	0.29
Other insurance	0.19	0.39	0.91	0.69
Private insurance	0.06	0.16	0.51	0.28
In catchment	0.88	0.77	0.42	0.77

Variable	Region 12 / Military Status (Source of Care)			
	Active Duty (All)	Non-Active Duty (Prime)	Non-Active Duty (Civilian Care Only)	Non-Active Duty (Other Nonenrolled)
Married	0.70	0.90	0.82	0.86
Male	0.84	0.20	0.43	0.38
Age (years)	31.75	41.26	56.84	48.22
SF12 mental health scale	51.62	51.87	54.45	52.08
SF12 physical health scale	51.79	50.05	50.79	46.68
Less than 45 minutes to provider	0.87	0.87	0.91	0.77
Hispanic	0.07	0.07	0.01	0.04
African American	0.13	0.04	0.03	0.07
High school education	0.64	0.63	0.60	0.64
Four or more years college education	0.36	0.32	0.34	0.33
Other insurance	0.19	0.26	0.92	0.62
Private insurance	0.05	0.10	0.58	0.29
In catchment	1.00	0.96	0.85	0.97

APPENDIX C: REGIONAL CHANGES FROM 1994 TO 1998 IN ACCESS AND SATISFACTION WITH CARE INDICATORS

Table C-1 shows regional changes from 1994 to 1998 in outcome measures for each subpopulation. Estimates are based on 1998 population characteristics. An entry of "n/a" (not available) indicates that there were too few observations to make a reliable estimate. Entries marked with an asterisk (*) indicate a statistically significant change ($p<0.05$).

Table C-1. Regional Changes in Outcome Measures

		Military Status (Source of Care)									
		AD (All)		Non-AD (Prime)		Non-AD (Civilian)		Non-AD (Other Nonenrolled)		Total	
Measure	Region	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
Appointment gap (days)	3	10.40	6.86*	13.86	8.33*	8.40	7.87	14.56	9.59*	11.24	7.90*
	4	7.82	6.77	11.79	7.63*	6.78	7.57	13.83	8.55*	9.67	7.49*
	6	11.61	7.55*	17.23	8.35*	5.82	7.14*	18.89	8.74*	12.50	7.70*
	7/8	10.56	7.17*	13.19	8.51*	7.18	7.81	15.01	7.82*	11.22	7.86*
	9	10.30	5.98*	10.72	7.38*	7.55	7.56	10.60	6.18*	9.74	6.88*
	10	7.57	6.21	9.53	8.53	9.38	7.86*	13.95	7.39*	10.43	7.77*
	11	9.02	6.89*	14.63	8.93*	7.31	8.64*	14.44	8.60*	10.46	8.35*
	12	10.31	6.88*	10.92	7.31*	6.03	6.43	12.60	7.17*	10.50	6.96*
	Total	10.27	6.89*	13.35	8.19*	7.39	7.74*	14.93	8.11*	11.01	7.70*
BP check past year	3	0.81	0.87*	0.79	0.91*	0.90	0.96*	0.91	0.97*	0.81	0.91*
	4	0.79	0.90*	0.78	0.92*	0.89	0.96*	0.90	0.97*	0.79	0.91*
	6	0.79	0.91*	0.76	0.93*	0.90	0.97*	0.89	0.98*	0.81	0.92*
	7/8	0.79	0.90*	0.74	0.90*	0.90	0.93	0.87	0.95*	0.80	0.89*
	9	0.75	0.87*	0.80	0.91*	0.94	0.97	0.85	0.96*	0.81	0.89*
	10	0.67	0.91*	0.84	0.92*	0.91	0.96*	0.88	0.97*	0.83	0.91*
	11	0.84	0.92*	0.77	0.93*	0.91	0.94	0.87	0.94*	0.80	0.90*
	12	0.86	0.92	0.79	0.93*	0.90	0.94	0.89	0.89	0.82	0.91*
	Total	0.79	0.90*	0.78	0.91*	0.90	0.96*	0.89	0.96*	0.81	0.91*
Cholesterol check past year	3	0.49	0.36*	0.47	0.52*	0.72	0.72	0.63	0.67	0.55	0.57*
	4	0.45	0.38*	0.49	0.48	0.69	0.61*	0.60	0.60	0.52	0.52
	6	0.45	0.40	0.44	0.53*	0.64	0.65	0.62	0.62	0.51	0.54*
	7/8	0.47	0.40*	0.40	0.46*	0.63	0.67	0.61	0.55	0.51	0.51
	9	0.34	0.30	0.47	0.44	0.75	0.71	0.53	0.48	0.49	0.46
	10	0.40	0.38	0.54	0.54	0.71	0.66	0.62	0.70	0.58	0.56
	11	0.46	0.38	0.41	0.47	0.66	0.61	0.51	0.50	0.50	0.48
	12	0.54	0.36*	0.38	0.41	0.70	0.62	0.49	0.58	0.48	0.42*
	Total	0.44	0.37*	0.45	0.49*	0.68	0.67	0.60	0.60	0.52	0.52

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Table C-1—*Continued*

		Military Status (Source of Care)									
		AD (All)		Non-AD (Prime)		Non-AD (Civilian)		Non-AD (Other Nonenrolled)		Total	
Measure	Region	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
Dental care past year	3	0.88	0.86	0.39	0.62*	0.69	0.69	0.44	0.68*	0.59	0.69*
	4	0.89	0.84*	0.43	0.58*	0.69	0.72	0.47	0.63*	0.59	0.68*
	6	0.86	0.85	0.42	0.53*	0.66	0.58*	0.44	0.55*	0.57	0.61*
	7/8	0.89	0.85*	0.44	0.63*	0.67	0.70	0.40	0.68*	0.58	0.70*
	9	0.90	0.83*	0.58	0.61	0.76	0.74	0.49	0.60*	0.70	0.70
	10	0.91	0.83*	0.49	0.64*	0.75	0.73	0.45	0.60*	0.63	0.69*
	11	0.89	0.88	0.47	0.63*	0.68	0.67	0.42	0.61*	0.61	0.68*
	12	0.94	0.89	0.64	0.64	0.76	0.74	0.56	0.65	0.75	0.77
	Total	0.89	0.85*	0.45	0.60*	0.69	0.68	0.44	0.62*	0.60	0.68*
Fewer than 3 calls to get appointment	3	0.57	0.78*	0.57	0.86*	0.75	0.97*	0.54	0.81*	0.64	0.89*
	4	0.56	0.85*	0.52	0.87*	0.79	0.97*	0.52	0.77*	0.66	0.91*
	6	0.53	0.78*	0.54	0.83*	0.77	0.97*	0.40	0.79*	0.58	0.87*
	7/8	0.61	0.84*	0.58	0.92*	0.76	0.97*	0.57	0.81*	0.64	0.91*
	9	0.54	0.82*	0.64	0.87*	0.77	0.98*	0.56	0.88*	0.65	0.89*
	10	0.70	0.89*	0.67	0.88*	0.73	0.95*	0.59	0.92*	0.68	0.92*
	11	0.61	0.88*	0.53	0.89*	0.80	0.96*	0.54	0.77*	0.65	0.91*
	12	0.61	0.83*	0.56	0.84*	0.76	0.98*	0.47	0.77*	0.60	0.86*
	Total	0.58	0.82*	0.57	0.87*	0.76	0.97*	0.51	0.82*	0.63	0.90*
Flu shot past year	3	0.84	0.79*	0.31	0.30	0.44	0.54*	0.42	0.47	0.44	0.51*
	4	0.76	0.77	0.29	0.30	0.43	0.56*	0.43	0.50	0.41	0.51*
	6	0.78	0.83*	0.41	0.40	0.45	0.56*	0.45	0.54*	0.47	0.56*
	7/8	0.78	0.85*	0.40	0.36	0.47	0.63*	0.51	0.56	0.48	0.58*
	9	0.80	0.81	0.29	0.33	0.52	0.66*	0.46	0.47	0.51	0.58*
	10	0.85	0.81	0.31	0.36	0.53	0.57	0.53	0.48	0.49	0.52
	11	0.79	0.83	0.40	0.42	0.48	0.61*	0.42	0.49	0.46	0.57*
	12	0.83	0.80	0.41	0.21*	0.58	0.56	0.45	0.45	0.58	0.55*
	Total	0.80	0.82*	0.34	0.35	0.47	0.58*	0.46	0.50*	0.46	0.54*
Interpersonal concern of providers	3	0.50	0.79*	0.63	0.86*	0.83	0.95*	0.61	0.88*	0.69	0.89*
	4	0.48	0.79*	0.64	0.89*	0.82	0.95*	0.65	0.86*	0.69	0.90*
	6	0.54	0.77*	0.65	0.85*	0.88	0.96*	0.58	0.79*	0.69	0.87*
	7/8	0.48	0.81*	0.62	0.88*	0.86	0.95*	0.58	0.82*	0.67	0.89*
	9	0.46	0.83*	0.64	0.86*	0.87	0.95*	0.68	0.83*	0.68	0.87*
	10	0.52	0.82*	0.70	0.92*	0.88	0.97*	0.68	0.91*	0.77	0.93*
	11	0.50	0.79*	0.70	0.89*	0.88	0.95*	0.55	0.81*	0.71	0.89*
	12	0.49	0.84*	0.63	0.87*	0.92	0.98*	0.65	0.85*	0.62	0.87*
	Total	0.51	0.80*	0.64	0.87*	0.85	0.95*	0.61	0.84*	0.69	0.89*

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Table C-1—*Continued*

Measure	Region	Military Status (Source of Care)									
		AD (All)		Non-AD (Prime)		Non-AD (Civilian)		Non-AD (Other Nonenrolled)		Total	
		FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
Mammogram past year (40+)	3	–	–	0.67	0.71	0.75	0.76	0.74	0.77	0.66	0.71
	4	–	–	0.62	0.60	0.72	0.67	0.65	0.76*	0.64	0.65
	6	–	–	0.52	0.65*	0.68	0.71	0.59	0.65	0.60	0.66
	7/8	–	–	0.67	0.66	0.74	0.69	0.76	0.82	0.66	0.67
	9	–	–	0.73	0.67	0.70	0.72	0.68	0.62	0.67	0.65
	10	–	–	0.76	0.70	0.74	0.72	–	–	0.70	0.68
	11	–	–	0.57	0.61	0.70	0.69	0.72	0.55*	0.64	0.62
	12	–	–	–	–	0.50	0.76*	–	–	0.54	0.59*
	Total	–	–	0.65	0.65	0.72	0.71	0.68	0.69	0.65	0.67
Mammogram past year (50+)	3	–	–	0.75	0.71	0.77	0.76	0.73	0.79	0.70	0.74
	4	–	–	0.65	0.61	0.73	0.70	0.73	0.81	0.68	0.68
	6	–	–	0.46	0.70*	0.70	0.78	0.64	0.70	0.61	0.72*
	7/8	–	–	0.73	0.74	0.75	0.75	0.76	0.84	0.70	0.72
	9	–	–	0.79	0.78	0.75	0.72	0.71	0.69	0.71	0.70
	10	–	–	0.82	0.76	0.78	0.76	–	–	0.75	0.72
	11	–	–	0.63	0.64	0.69	0.72	0.80	0.66	0.67	0.65
	12	–	–	–	–	0.40	0.85*	–	–	0.55	0.72*
	Total	–	–	0.67	0.70	0.74	0.74	0.72	0.75	0.68	0.71*
PAP test past year	3	0.88	0.77*	0.71	0.67	0.70	0.67	0.71	0.70	0.69	0.67
	4	0.82	0.75	0.70	0.69	0.72	0.59*	0.71	0.70	0.67	0.63
	6	0.85	0.84	0.72	0.67	0.69	0.69	0.70	0.67	0.70	0.68
	7/8	0.84	0.77	0.76	0.70*	0.68	0.61	0.73	0.70	0.69	0.66*
	9	0.90	0.83	0.75	0.70	0.66	0.69	0.79	0.63*	0.73	0.67*
	10	0.80	0.83	0.74	0.67	0.71	0.60*	0.78	0.70	0.69	0.62*
	11	0.84	0.78	0.70	0.67	0.74	0.60*	0.72	0.61	0.71	0.62*
	12	–	–	0.71	0.73	0.65	0.67	0.73	0.66	0.67	0.69
	Total	0.84	0.79	0.72	0.68	0.69	0.64*	0.73	0.67	0.69	0.66*
Physical exam past year	3	0.52	0.42*	0.48	0.56*	0.71	0.68	0.59	0.68*	0.56	0.57
	4	0.54	0.50	0.47	0.54*	0.67	0.61	0.58	0.55	0.53	0.54
	6	0.50	0.47	0.48	0.55*	0.68	0.69	0.55	0.50	0.54	0.55
	7/8	0.49	0.49	0.43	0.52*	0.70	0.72	0.57	0.59	0.54	0.56
	9	0.42	0.44	0.57	0.56	0.73	0.68	0.56	0.61	0.56	0.54
	10	0.50	0.44	0.60	0.57	0.69	0.61*	0.64	0.65	0.60	0.55
	11	0.57	0.48*	0.46	0.53	0.72	0.63*	0.55	0.55	0.56	0.53*
	12	0.44	0.45	0.44	0.54	0.66	0.63	0.59	0.59	0.49	0.51
	Total	0.49	0.46*	0.49	0.54*	0.70	0.66*	0.56	0.59	0.55	0.55

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Table C-1—*Continued*

		Military Status (Source of Care)									
		AD (All)		Non-AD (Prime)		Non-AD (Civilian)		Non-AD (Other Nonenrolled)		Total	
Measure	Region	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
Prenatal care first trimester	3	–	–	0.88	0.88	–	–	–	–	0.90	0.89
	4	–	–	0.92	0.95	–	–	–	–	0.93	0.94
	6	–	–	0.96	0.91	–	–	–	–	0.93	0.89
	7/8	–	–	0.87	0.88	–	–	–	–	0.93	0.89
	9	–	–	0.98	0.91	–	–	–	–	0.99	0.93
	10	–	–	–	–	–	–	–	–	–	–
	11	–	–	0.84	0.82	–	–	–	–	0.87	0.84
	12	–	–	–	–	–	–	–	–	–	–
	Total	–	–	0.93	0.90	–	–	–	–	0.93	0.90
Prostate check past year (age race dependent)	3	–	–	0.50	0.66*	0.69	0.78	0.73	0.79	0.58	0.70*
	4	–	–	0.61	0.60	0.72	0.74	0.70	0.67	0.61	0.66
	6	–	–	0.59	0.65	0.72	0.74	0.74	0.80	0.62	0.68
	7/8	–	–	0.52	0.56	0.76	0.70	0.77	0.64*	0.67	0.61
	9	–	–	0.63	0.57	0.75	0.77	0.69	0.63	0.66	0.65
	10	–	–	0.75	0.62*	0.80	0.65*	0.74	0.60	0.72	0.59*
	11	–	–	0.54	0.57	0.72	0.69	0.65	0.65	0.62	0.61
	12	–	–	–	–	0.79	0.57*	–	–	0.60	0.57*
	Total	–	–	0.59	0.61	0.74	0.73	0.71	0.71	0.63	0.65*
Satisfied with:											
Ability to diagnose	3	0.63	0.70*	0.72	0.82*	0.90	0.95*	0.72	0.86*	0.78	0.86*
	4	0.63	0.76*	0.74	0.84*	0.90	0.93*	0.75	0.80	0.81	0.86*
	6	0.63	0.70*	0.73	0.83*	0.91	0.94	0.69	0.81*	0.77	0.84*
	7/8	0.63	0.72*	0.77	0.81	0.90	0.91	0.71	0.83*	0.78	0.83*
	9	0.57	0.75*	0.84	0.86	0.94	0.94	0.71	0.80	0.77	0.84*
	10	0.64	0.83*	0.78	0.89*	0.93	0.96	0.80	0.88	0.84	0.92*
	11	0.65	0.75*	0.80	0.85*	0.88	0.91	0.74	0.79	0.79	0.85*
	12	0.56	0.76*	0.78	0.83	0.94	0.97*	0.67	0.75	0.69	0.81*
	Total	0.63	0.73*	0.76	0.83*	0.91	0.94*	0.72	0.82*	0.78	0.85*
Access to care if needed	3	0.61	0.63	0.64	0.79*	0.90	0.94*	0.56	0.55	0.72	0.79*
	4	0.55	0.64*	0.61	0.78*	0.92	0.94	0.54	0.50	0.72	0.79*
	6	0.56	0.66*	0.53	0.77*	0.91	0.94	0.51	0.55	0.67	0.78*
	7/8	0.59	0.64*	0.63	0.81*	0.90	0.94*	0.55	0.65	0.70	0.81*
	9	0.58	0.70*	0.79	0.80	0.94	0.95	0.75	0.76	0.77	0.81
	10	0.60	0.75*	0.73	0.78	0.91	0.93	0.64	0.61	0.79	0.83*
	11	0.60	0.73*	0.72	0.82*	0.94	0.96	0.57	0.59	0.75	0.83*
	12	0.67	0.76	0.73	0.82	0.99	1.00	0.65	0.60	0.73	0.81*
	Total	0.59	0.67*	0.65	0.79*	0.92	0.94*	0.58	0.60	0.72	0.80*

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Table C-1—*Continued*

		Military Status (Source of Care)									
		AD (All)		Non-AD (Prime)		Non-AD (Civilian)		Non-AD (Other Nonenrolled)		Total	
Measure	Region	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
Access to emergency care	3	0.71	0.65*	0.73	0.78*	0.91	0.95*	0.65	0.70	0.79	0.82*
	4	0.63	0.63	0.71	0.80*	0.93	0.94	0.68	0.53*	0.78	0.81*
	6	0.66	0.68	0.70	0.77*	0.91	0.94	0.64	0.69	0.76	0.81
	7/8	0.65	0.65	0.77	0.76	0.87	0.96*	0.66	0.70	0.77	0.81*
	9	0.69	0.76	0.83	0.81	0.94	0.92	0.75	0.74	0.81	0.82
	10	0.62	0.64	0.78	0.77	0.91	0.95	0.65	0.69	0.81	0.83
	11	0.76	0.81	0.84	0.85	0.93	0.96	0.73	0.73	0.84	0.87
	12	0.76	0.79	0.82	0.82	0.97	0.96	0.78	0.78	0.79	0.83
	Total	0.68	0.69	0.75	0.79*	0.92	0.95*	0.68	0.69	0.79	0.82*
Access to hospital care	3	0.70	0.72	0.78	0.86*	0.93	0.96	0.61	0.66	0.80	0.86*
	4	0.66	0.72	0.73	0.84*	0.94	0.96	0.67	0.56*	0.80	0.85*
	6	0.71	0.76	0.71	0.84*	0.94	0.94	0.67	0.72	0.79	0.85*
	7/8	0.68	0.74*	0.80	0.86*	0.95	0.97*	0.70	0.75	0.81	0.87*
	9	0.64	0.79*	0.84	0.85	0.96	0.95	0.75	0.82	0.81	0.86
	10	0.70	0.78	0.77	0.79	0.95	0.94	0.67	0.61	0.84	0.85
	11	0.66	0.80*	0.86	0.89	0.97	0.99	0.66	0.68	0.83	0.89*
	12	0.70	0.84*	0.88	0.87	0.97	0.99	0.74	0.74	0.80	0.87
	Total	0.69	0.76*	0.78	0.85*	0.95	0.96	0.68	0.70	0.80	0.86*
Access to specialist	3	0.41	0.50*	0.54	0.75*	0.88	0.94*	0.43	0.51	0.65	0.76*
	4	0.39	0.56*	0.51	0.70*	0.90	0.93	0.43	0.51	0.65	0.77*
	6	0.43	0.54*	0.49	0.71*	0.91	0.91	0.42	0.53*	0.63	0.73*
	7/8	0.40	0.53*	0.55	0.75*	0.88	0.94*	0.47	0.57	0.63	0.77*
	9	0.33	0.59*	0.67	0.71	0.91	0.91	0.52	0.59	0.65	0.72*
	10	0.43	0.69*	0.64	0.76*	0.93	0.93	0.56	0.62	0.75	0.83*
	11	0.39	0.61*	0.63	0.75*	0.93	0.94	0.54	0.61	0.69	0.78*
	12	0.52	0.65*	0.61	0.73*	0.94	0.99*	0.56	0.64	0.60	0.73*
	Total	0.41	0.56*	0.56	0.73*	0.90	0.93*	0.46	0.55*	0.65	0.76*
Administrative staff courtesy	3	0.63	0.87*	0.75	0.92*	0.93	0.97*	0.73	0.90*	0.80	0.93*
	4	0.58	0.86*	0.79	0.93*	0.90	0.98*	0.77	0.95*	0.80	0.95*
	6	0.62	0.84*	0.77	0.90*	0.94	0.99*	0.71	0.91*	0.78	0.92*
	7/8	0.62	0.88*	0.72	0.92*	0.93	0.98*	0.71	0.91*	0.78	0.94*
	9	0.57	0.88*	0.81	0.91*	0.95	0.99*	0.72	0.89*	0.78	0.92*
	10	0.69	0.91*	0.81	0.94*	0.95	0.98*	0.76	0.97*	0.86	0.96*
	11	0.63	0.88*	0.74	0.93*	0.97	0.98	0.69	0.93*	0.80	0.94*
	12	0.57	0.89*	0.69	0.90*	0.98	0.99	0.66	0.85*	0.69	0.91*
	Total	0.62	0.87*	0.77	0.92*	0.93	0.98*	0.72	0.91*	0.79	0.93*

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Table C-1—*Continued*

Measure	Region	Military Status (Source of Care)									
		AD (All)		Non-AD (Prime)		Non-AD (Civilian)		Non-AD (Other Nonenrolled)		Total	
		FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
Appointment gap	3	0.50	0.65*	0.56	0.75*	0.88	0.92	0.50	0.61*	0.68	0.78*
	4	0.51	0.71*	0.60	0.76*	0.90	0.89	0.55	0.54	0.71	0.79*
	6	0.49	0.65*	0.50	0.74*	0.89	0.91	0.47	0.61*	0.63	0.77*
	7/8	0.51	0.66*	0.58	0.80*	0.91	0.90	0.48	0.67*	0.66	0.80*
	9	0.49	0.71*	0.73	0.76	0.92	0.90	0.66	0.70	0.73	0.78*
	10	0.54	0.73*	0.73	0.76	0.89	0.91	0.64	0.69	0.76	0.82*
	11	0.56	0.69*	0.68	0.76*	0.90	0.92	0.53	0.60	0.71	0.79*
	12	0.48	0.75*	0.66	0.80*	0.97	0.98	0.57	0.74*	0.62	0.80*
	Total	0.51	0.68*	0.60	0.76*	0.89	0.91	0.52	0.63*	0.68	0.78*
Attention by provider	3	0.68	0.82*	0.73	0.86*	0.88	0.95*	0.74	0.83*	0.78	0.89*
	4	0.66	0.83*	0.78	0.87*	0.87	0.94*	0.76	0.85*	0.80	0.90*
	6	0.67	0.80*	0.74	0.85*	0.92	0.97*	0.66	0.84*	0.77	0.89*
	7/8	0.67	0.81*	0.75	0.88*	0.91	0.94	0.71	0.85*	0.78	0.89*
	9	0.67	0.86*	0.83	0.87	0.92	0.94	0.81	0.84	0.80	0.89*
	10	0.77	0.89*	0.83	0.93*	0.91	0.94	0.81	0.87	0.85	0.92*
	11	0.67	0.83*	0.81	0.90*	0.92	0.94	0.70	0.85*	0.81	0.90*
	12	0.64	0.85*	0.80	0.88	0.97	0.97	0.78	0.85	0.74	0.87*
	Total	0.67	0.83*	0.77	0.87*	0.90	0.95*	0.73	0.84*	0.79	0.89*
Availability of information by phone	3	0.39	0.61*	0.47	0.75*	0.79	0.89*	0.41	0.58*	0.59	0.77*
	4	0.36	0.66*	0.46	0.73*	0.79	0.84	0.44	0.53	0.60	0.75*
	6	0.34	0.63*	0.54	0.72*	0.84	0.87	0.37	0.51*	0.58	0.74*
	7/8	0.37	0.68*	0.48	0.79*	0.84	0.89	0.43	0.67*	0.58	0.79*
	9	0.36	0.63*	0.59	0.74*	0.84	0.89*	0.45	0.63*	0.60	0.74*
	10	0.31	0.70*	0.62	0.73*	0.84	0.90*	0.49	0.60	0.67	0.80*
	11	0.38	0.67*	0.56	0.78*	0.86	0.87	0.45	0.53	0.63	0.77*
	12	0.42	0.69*	0.54	0.79*	0.92	0.97*	0.44	0.60	0.54	0.77*
	Total	0.37	0.64*	0.52	0.75*	0.82	0.88*	0.42	0.57*	0.59	0.76*
Availability of prescription services	3	0.76	0.81	0.86	0.86	0.91	0.92	0.82	0.85	0.85	0.87
	4	0.77	0.86*	0.85	0.89*	0.93	0.90	0.84	0.86	0.87	0.88*
	6	0.75	0.82*	0.81	0.85	0.91	0.92	0.81	0.86	0.83	0.87*
	7/8	0.78	0.82*	0.82	0.86*	0.95	0.95	0.83	0.89	0.86	0.89*
	9	0.69	0.84*	0.84	0.90*	0.95	0.93	0.83	0.88	0.84	0.89*
	10	0.70	0.82*	0.83	0.85	0.94	0.95	0.85	0.93*	0.88	0.90*
	11	0.73	0.86*	0.85	0.86	0.96	0.94	0.76	0.81	0.85	0.88*
	12	0.85	0.92*	0.74	0.92*	0.97	0.95	0.92	0.91	0.88	0.93*
	Total	0.76	0.83*	0.83	0.87*	0.93	0.92	0.82	0.87	0.85	0.88*

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Table C-1—*Continued*

Measure	Region	Military Status (Source of Care)									
		AD (All)		Non-AD (Prime)		Non-AD (Civilian)		Non-AD (Other Nonenrolled)		Total	
		FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
Convenience of hours	3	0.62	0.71*	0.79	0.85*	0.93	0.97*	0.75	0.83*	0.81	0.87*
	4	0.60	0.74*	0.81	0.87*	0.93	0.94	0.79	0.84	0.82	0.88*
	6	0.64	0.75*	0.76	0.86*	0.92	0.97*	0.73	0.79	0.79	0.87*
	7/8	0.62	0.73*	0.79	0.84*	0.95	0.97	0.72	0.87*	0.79	0.87*
	9	0.65	0.77*	0.81	0.86	0.95	0.95	0.80	0.86	0.82	0.86*
	10	0.55	0.76*	0.82	0.87*	0.96	0.96	0.81	0.83	0.86	0.89*
	11	0.66	0.78*	0.85	0.90*	0.94	0.98*	0.78	0.81	0.84	0.90*
	12	0.70	0.77	0.73	0.84*	0.98	0.98	0.81	0.86	0.77	0.84
	Total	0.64	0.74*	0.79	0.86*	0.94	0.96*	0.76	0.83*	0.81	0.87*
Convenience of treatment location	3	0.79	0.82	0.79	0.85*	0.90	0.95*	0.73	0.75	0.82	0.87*
	4	0.79	0.84*	0.81	0.86*	0.90	0.93*	0.76	0.76	0.83	0.88*
	6	0.87	0.89	0.79	0.88*	0.91	0.94	0.69	0.74	0.83	0.89*
	7/8	0.81	0.85*	0.84	0.87	0.90	0.91	0.74	0.75	0.83	0.87
	9	0.77	0.84	0.86	0.85	0.94	0.94	0.80	0.87	0.84	0.88
	10	0.85	0.84	0.79	0.84*	0.93	0.96	0.55	0.62	0.83	0.88*
	11	0.81	0.87*	0.83	0.87	0.88	0.91	0.77	0.79	0.84	0.88*
	12	0.84	0.89	0.89	0.92	0.94	0.97*	0.81	0.79	0.87	0.91
	Total	0.81	0.86*	0.82	0.87*	0.91	0.94*	0.72	0.77	0.83	0.88*
Ease of making an appointment	3	0.48	0.57*	0.54	0.75*	0.92	0.95*	0.47	0.62*	0.68	0.79*
	4	0.48	0.69*	0.49	0.79*	0.95	0.97*	0.46	0.53	0.68	0.83*
	6	0.39	0.54*	0.43	0.74*	0.95	0.98*	0.40	0.56*	0.60	0.77*
	7/8	0.50	0.65*	0.55	0.83*	0.96	0.96	0.46	0.64*	0.67	0.82*
	9	0.45	0.67*	0.72	0.81*	0.97	0.95	0.65	0.72	0.73	0.80*
	10	0.53	0.71*	0.74	0.81*	0.93	0.95	0.59	0.74	0.77	0.86*
	11	0.44	0.69*	0.57	0.81*	0.97	0.97	0.40	0.56*	0.68	0.82*
	12	0.46	0.69*	0.54	0.75*	0.99	1.00	0.52	0.55	0.58	0.75*
	Total	0.47	0.63*	0.56	0.78*	0.95	0.96*	0.47	0.61*	0.67	0.80*
Explanation of medical tests	3	0.70	0.74	0.75	0.85*	0.87	0.94*	0.76	0.86*	0.80	0.87*
	4	0.63	0.77*	0.75	0.85*	0.90	0.91	0.78	0.84*	0.80	0.86*
	6	0.66	0.75*	0.75	0.83*	0.94	0.93	0.74	0.78	0.80	0.85*
	7/8	0.67	0.77*	0.76	0.85*	0.92	0.96	0.75	0.80	0.80	0.87*
	9	0.62	0.77*	0.81	0.85	0.92	0.94	0.79	0.82	0.79	0.85*
	10	0.69	0.84*	0.81	0.86	0.90	0.93	0.84	0.88	0.85	0.89*
	11	0.66	0.78*	0.85	0.90*	0.92	0.94	0.74	0.74	0.83	0.87*
	12	0.65	0.79*	0.78	0.83	0.96	0.98	0.76	0.72	0.75	0.83*
	Total	0.66	0.76*	0.77	0.85*	0.90	0.94*	0.76	0.81*	0.80	0.86*

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Table C-1—*Continued*

		Military Status (Source of Care)									
		AD (All)		Non-AD (Prime)		Non-AD (Civilian)		Non-AD (Other Nonenrolled)		Total	
Measure	Region	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
Explanation of procedures	3	0.71	0.75	0.76	0.85*	0.87	0.96*	0.75	0.81	0.80	0.87*
	4	0.67	0.77*	0.77	0.87*	0.91	0.94	0.78	0.81	0.82	0.88*
	6	0.70	0.76*	0.75	0.83*	0.94	0.94	0.74	0.77	0.81	0.85*
	7/8	0.69	0.77*	0.79	0.83	0.92	0.96*	0.74	0.80	0.80	0.87*
	9	0.60	0.77*	0.81	0.87*	0.93	0.95	0.82	0.84	0.80	0.86*
	10	0.75	0.84*	0.81	0.87*	0.91	0.93	0.85	0.88	0.86	0.89*
	11	0.68	0.79*	0.85	0.89*	0.94	0.96	0.75	0.73	0.83	0.88*
	12	0.66	0.81*	0.74	0.85*	0.96	1.00*	0.77	0.71	0.75	0.85*
	Total	0.69	0.77*	0.78	0.85*	0.91	0.95*	0.76	0.80	0.81	0.87*
Satisfied with outcome of health care	3	0.70	0.75	0.79	0.84*	0.89	0.96*	0.77	0.87*	0.81	0.87*
	4	0.69	0.77*	0.80	0.85*	0.93	0.94	0.78	0.86*	0.83	0.88*
	6	0.67	0.73*	0.75	0.85*	0.95	0.95	0.74	0.82	0.80	0.85*
	7/8	0.71	0.76*	0.78	0.85*	0.92	0.97*	0.75	0.83*	0.81	0.88*
	9	0.64	0.78*	0.86	0.87	0.94	0.94	0.81	0.85	0.82	0.86
	10	0.64	0.80*	0.80	0.88*	0.93	0.94	0.83	0.88	0.86	0.90*
	11	0.63	0.80*	0.84	0.89*	0.93	0.95	0.78	0.75	0.82	0.88*
	12	0.56	0.79*	0.80	0.88	0.98	0.99*	0.73	0.69	0.72	0.84*
	Total	0.68	0.76*	0.79	0.85*	0.92	0.95*	0.76	0.83*	0.81	0.87*
Satisfied with overall quality of care	3	0.66	0.73*	0.79	0.85*	0.90	0.97*	0.74	0.85*	0.80	0.88*
	4	0.67	0.77*	0.77	0.88*	0.94	0.97*	0.75	0.81	0.82	0.89*
	6	0.67	0.74*	0.71	0.86*	0.96	0.97	0.70	0.76	0.79	0.86*
	7/8	0.67	0.75*	0.79	0.86*	0.93	0.97*	0.75	0.81	0.81	0.87*
	9	0.65	0.77*	0.86	0.89	0.95	0.96	0.84	0.89	0.83	0.88*
	10	0.56	0.78*	0.83	0.89*	0.94	0.95	0.82	0.80	0.85	0.90*
	11	0.67	0.80*	0.84	0.91*	0.94	0.97	0.76	0.77	0.83	0.89*
	12	0.59	0.80*	0.81	0.90*	0.98	0.99	0.73	0.74	0.74	0.86*
	Total	0.66	0.76*	0.79	0.87*	0.93	0.97*	0.75	0.81*	0.81	0.88*
Satisfied with skill of provider	3	0.69	0.77*	0.78	0.87*	0.93	0.97*	0.77	0.90*	0.82	0.89*
	4	0.72	0.81*	0.81	0.88*	0.93	0.94	0.81	0.87*	0.85	0.89*
	6	0.70	0.77*	0.80	0.88*	0.92	0.97*	0.76	0.86*	0.81	0.89*
	7/8	0.70	0.78*	0.78	0.85*	0.95	0.97	0.80	0.91*	0.84	0.89*
	9	0.59	0.78*	0.85	0.87	0.95	0.95	0.82	0.87	0.81	0.87*
	10	0.68	0.86*	0.85	0.91*	0.96	0.96	0.86	0.85	0.89	0.92*
	11	0.72	0.81*	0.86	0.91*	0.94	0.98*	0.80	0.84	0.85	0.91*
	12	0.68	0.85*	0.77	0.90*	0.98	0.98	0.75	0.80	0.75	0.88*
	Total	0.69	0.79*	0.81	0.88*	0.94	0.96*	0.79	0.87*	0.83	0.89*

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Table C-1—*Continued*

		Military Status (Source of Care)									
		AD (All)		Non-AD (Prime)		Non-AD (Civilian)		Non-AD (Other Nonenrolled)		Total	
Measure	Region	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
Satisfied with thoroughness of exam	3	0.67	0.75*	0.75	0.85*	0.89	0.95*	0.70	0.87*	0.78	0.87*
	4	0.66	0.78*	0.78	0.85*	0.92	0.95	0.78	0.80	0.81	0.88*
	6	0.67	0.75*	0.72	0.84*	0.94	0.93	0.69	0.81*	0.78	0.85*
	7/8	0.67	0.76*	0.76	0.83*	0.94	0.98*	0.73	0.79	0.80	0.87*
	9	0.60	0.77*	0.79	0.86*	0.91	0.92	0.73	0.81	0.76	0.85*
	10	0.68	0.84*	0.77	0.86*	0.93	0.93	0.83	0.90	0.85	0.90*
	11	0.65	0.79*	0.82	0.88*	0.92	0.95	0.74	0.81	0.81	0.88*
	12	0.65	0.80*	0.75	0.86*	0.98	1.00	0.76	0.72	0.73	0.84*
	Total	0.66	0.77*	0.76	0.85*	0.92	0.95*	0.73	0.82*	0.79	0.87*
Satisfied with thoroughness of treatment	3	0.67	0.74*	0.79	0.85*	0.89	0.96*	0.74	0.87*	0.80	0.88*
	4	0.70	0.77*	0.79	0.84*	0.93	0.97*	0.75	0.83*	0.82	0.88*
	6	0.68	0.73	0.76	0.85*	0.95	0.97	0.71	0.79	0.81	0.86*
	7/8	0.66	0.74*	0.78	0.85*	0.92	0.97*	0.78	0.84	0.81	0.87*
	9	0.59	0.77*	0.83	0.84	0.95	0.92	0.79	0.83	0.79	0.84*
	10	0.66	0.81*	0.81	0.89*	0.95	0.95	0.83	0.88	0.87	0.91*
	11	0.69	0.78*	0.85	0.88	0.95	0.96	0.76	0.81	0.84	0.88*
	12	0.57	0.79*	0.85	0.88	0.98	0.99	0.73	0.73	0.72	0.85*
	Total	0.66	0.75*	0.80	0.85*	0.93	0.96*	0.76	0.83*	0.81	0.87*
Satisfied with time spent with provider	3	0.64	0.78*	0.68	0.81*	0.85	0.91*	0.71	0.85*	0.75	0.85*
	4	0.62	0.77*	0.67	0.84*	0.85	0.87	0.72	0.85*	0.75	0.84*
	6	0.60	0.75*	0.70	0.81*	0.91	0.90	0.64	0.74	0.74	0.83*
	7/8	0.62	0.77*	0.71	0.82*	0.88	0.92	0.67	0.83*	0.75	0.85*
	9	0.51	0.80*	0.73	0.82*	0.88	0.89	0.70	0.76	0.72	0.83*
	10	0.59	0.83*	0.75	0.87*	0.88	0.93*	0.72	0.86*	0.80	0.90*
	11	0.62	0.77*	0.76	0.88*	0.90	0.93	0.63	0.75	0.77	0.87*
	12	0.63	0.80*	0.70	0.84*	0.95	0.99*	0.73	0.85	0.71	0.85*
	Total	0.61	0.78*	0.71	0.83*	0.87	0.90*	0.69	0.80*	0.75	0.85*
Satisfied with waiting time to see provider	3	0.43	0.57*	0.58	0.70*	0.83	0.85	0.53	0.63*	0.64	0.73*
	4	0.46	0.64*	0.59	0.75*	0.84	0.77*	0.58	0.58	0.67	0.72*
	6	0.44	0.59*	0.56	0.72*	0.82	0.84	0.57	0.65	0.62	0.73*
	7/8	0.48	0.65*	0.60	0.77*	0.82	0.86	0.59	0.74*	0.65	0.77*
	9	0.42	0.61*	0.63	0.71*	0.88	0.89	0.56	0.64	0.65	0.73*
	10	0.46	0.63*	0.68	0.75*	0.88	0.87	0.62	0.81*	0.72	0.80*
	11	0.43	0.67*	0.65	0.77*	0.90	0.92	0.57	0.66	0.68	0.80*
	12	0.42	0.66*	0.55	0.75*	0.93	0.96	0.56	0.65	0.55	0.74*
	Total	0.44	0.62*	0.60	0.74*	0.84	0.85	0.57	0.65*	0.65	0.74*

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Table C-1—*Continued*

		Military Status (Source of Care)									
		AD (All)		Non-AD (Prime)		Non-AD (Civilian)		Non-AD (Other Nonenrolled)		Total	
Measure	Region	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
Used ER past year	3	0.48	0.32*	0.47	0.34*	0.34	0.23*	0.48	0.35*	0.42	0.29*
	4	0.50	0.31*	0.49	0.31*	0.31	0.17*	0.49	0.39*	0.41	0.27*
	6	0.50	0.33*	0.44	0.37*	0.30	0.25	0.49	0.43	0.42	0.33*
	7/8	0.53	0.32*	0.54	0.31*	0.30	0.21*	0.52	0.33*	0.45	0.28*
	9	0.41	0.31*	0.40	0.28*	0.33	0.24*	0.44	0.27*	0.39	0.27*
	10	0.36	0.23*	0.32	0.25*	0.35	0.27*	0.44	0.40	0.38	0.28*
	11	0.47	0.30*	0.50	0.36*	0.35	0.21*	0.51	0.34*	0.45	0.29*
	12	0.55	0.30*	0.46	0.32*	0.30	0.17*	0.54	0.46	0.51	0.30*
	Total	0.49	0.31*	0.46	0.33*	0.33	0.22*	0.49	0.37*	0.42	0.29*
Waited less than 30 minutes in provider office	3	0.70	0.74	0.69	0.77*	0.83	0.80	0.68	0.73	0.75	0.78*
	4	0.73	0.79*	0.73	0.81*	0.81	0.78	0.69	0.77	0.75	0.79*
	6	0.70	0.76*	0.72	0.79*	0.84	0.81	0.64	0.79*	0.74	0.79*
	7/8	0.77	0.80	0.79	0.87*	0.88	0.86	0.78	0.89*	0.81	0.85*
	9	0.71	0.74	0.78	0.80	0.92	0.90	0.64	0.75	0.79	0.81
	10	0.72	0.78	0.84	0.81	0.95	0.90*	0.69	0.81*	0.85	0.85
	11	0.74	0.77	0.76	0.86*	0.94	0.92	0.68	0.80*	0.82	0.86*
	12	0.66	0.79*	0.77	0.84	0.95	0.94	0.72	0.72	0.74	0.83
	Total	0.72	0.77*	0.75	0.81*	0.87	0.84	0.69	0.78*	0.78	0.81*

APPENDIX D: EFFECT OF PCM TYPE ON PERCEPTIONS OF PRIME ENROLLEES BY TRICARE REGION

Tables D-1 and D-2 contrast the responses of Prime enrollees to survey items by region, with the focus on the effects of having a military versus a civilian provider. Entries marked with an asterisk (*) indicate a statistically significant change ($p<0.05$).

In general, the results indicate that those with military providers tended to have higher levels of satisfaction than those with civilian providers. The pattern of results is consistent across regions. The data come from the 1998 DoD Beneficiary survey.

Table D-1. Perceptual Differences of Prime Enrollees by PCM Type

	Region			
	3		4	
Measure	Civilian	Military	Civilian	Military
Prime improves access to care	0.57	0.75*	0.64	0.74
Prime improves access to preventative care	0.62	0.77*	0.67	0.72
Easier to see specialist under Prime	0.38	0.51*	0.41	0.51
Easier to get phone advice under Prime	0.55	0.74*	0.58	0.67
Prime saves money for care	0.70	0.82*	0.70	0.75
Pregnant non-smoker	0.68	0.88	0.99	0.86*
Recommend Prime to friends	0.63	0.86*	0.73	0.89*
Satisfied with Prime	0.62	0.89*	0.76	0.93*

	Region			
	6		7/8	
Measure	Civilian	Military	Civilian	Military
Prime improves access to care	0.71	0.70	0.61	0.69
Prime improves access to preventative care	0.72	0.73	0.67	0.70
Easier to see specialist under Prime	0.43	0.54	0.37	0.48*
Easier to get phone advice under Prime	0.62	0.71	0.52	0.76*
Prime saves money for care	0.76	0.78	0.64	0.73
Pregnant non-smoker	0.91	0.87	0.99	0.86
Recommend Prime to friends	0.77	0.88*	0.63	0.86*
Satisfied with Prime	0.75	0.90*	0.70	0.90*

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Table D-1—*Continued*

Measure	Region 9 Civilian	Region 9 Military	Region 10 Civilian	Region 10 Military
Prime improves access to care	0.78	0.84	0.79	0.80
Prime improves access to preventative care	0.83	0.81	0.83	0.76
Easier to see specialist under Prime	0.39	0.59*	0.51	0.67*
Easier to get phone advice under Prime	0.64	0.70	0.64	0.76
Prime saves money for care	0.84	0.88	0.85	0.73
Pregnant non-smoker	0.90	0.76	0.89	0.43*
Recommend Prime to friends	0.87	0.88	0.89	0.89
Satisfied with Prime	0.90	0.91	0.90	0.93

Measure	Region 11 Civilian	Region 11 Military	Region 12 Civilian	Region 12 Military
Prime improves access to care	0.73	0.76	0.76	0.82
Prime improves access to preventative care	0.71	0.81*	0.63	0.82
Easier to see specialist under Prime	0.47	0.57	0.53	0.55
Easier to get phone advice under Prime	0.65	0.75	0.74	0.77
Prime saves money for care	0.76	0.82	0.84	0.83
Pregnant non-smoker	n/a	n/a	0.67	0.83
Recommend Prime to friends	0.71	0.89*	0.58	0.92*
Satisfied with Prime	0.77	0.92*	0.69	0.92*

Table D-2. Additional Measures: Effect of PCM Type on Prime Enrollee Preventive Care and Wait Time for Appointments

Measure	Region 3 Civilian	Region 3 Military	Region 4 Civilian	Region 4 Military
Preventive care				
Pregnant and did not smoke	0.68	0.88	0.99	0.86*
Know results of blood pressure check	0.96	0.90	0.92	0.94
Breast exam past year (age 40+)	0.77	0.74	0.62	0.71
Did not chew tobacco past year (all ages)	0.98	0.98	0.99	0.96
Cholesterol test past 5 years	0.81	0.77	0.75	0.78
Dental care past year	0.62	0.62	0.62	0.58
Did not chew tobacco past year (age 18–24)	1.00	0.90	–	–
Flu shot (age 65+)	–	–	0.43	0.82
Mammogram past year (age 50+)	0.83	0.71	0.59	0.72
Ever had mammogram (age 40–49)	0.97	0.98	0.87	0.95
Mammogram past 2 years (age 50+)	0.95	0.89	0.77	0.84
PAP smear past 3 years	0.90	0.95*	0.88	0.95*
Ever had PAP test	0.99	0.98	0.99	1.00
Physical exam past year	0.60	0.52	0.53	0.52
First trimester care	0.96	0.81	–	–
Prostate check (age 50+)	0.72	0.62	0.51	0.65
Prostate check (age40+/B, 50+W)	0.63	0.62	0.50	0.65
Not smoke (age 18–24)	0.97	0.71	0.86	0.71
Waiting time for an appointment				
Minor care (days)	2.68	2.40	2.10	2.72*
Routine care (days)	12.57	12.71	10.72	12.50*
Urgent care (days)	0.96	0.64*	0.89	0.67*
Minor care (< 3 days)	0.77	0.85	0.83	0.80
Routine care (< 30 days)	0.89	0.91	0.96	0.93
Urgent care (1 day)	0.71	0.87*	0.73	0.88*

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Table D-1—*Continued*

Measure	Region			
	6		7/8	
	Civilian	Military	Civilian	Military
Preventive care				
Pregnant and did not smoke	0.91	0.87	0.99	0.86
Know results of blood pressure check	0.95	0.93	0.90	0.92
Breast exam past year (age 40+)	0.73	0.78	0.67	0.77
Did not chew tobacco past year (all ages)	0.96	0.96	0.98	0.98
Cholesterol test past 5 years	0.78	0.78	0.65	0.75*
Dental care past year	0.51	0.58	0.56	0.66
Did not chew tobacco past year (age 18–24)	0.77	0.84	0.54	0.59
Flu shot (age 65+)	0.83	0.88	0.73	0.85
Mammogram past year (age 50+)	0.74	0.71	0.60	0.75*
Ever had mammogram (age 40–49)	0.93	0.96	0.88	0.91
Mammogram past 2 years (age 50+)	0.90	0.92	0.67	0.87*
PAP smear past 3 years	0.91	0.94	0.88	0.93*
Ever had PAP test	1.00	0.99	0.98	0.99
Physical exam past year	0.56	0.56	0.56	0.50
First trimester care	0.95	0.97	0.96	0.89
Prostate check (age 50+)	0.58	0.67	0.59	0.68
Prostate check (age40+/B, 50+W)	0.56	0.69*	0.58	0.67
Not smoke (age 18–24)	0.63	0.86*	0.81	0.65*
Waiting time for an appointment				
Minor care (days)	2.80	3.09	0.43	3.16*
Routine care (days)	11.66	13.76	12.36	12.32
Urgent care (days)	0.65	0.70	0.72	0.69
Minor care (< 3 days)	0.81	0.79	0.94	0.74*
Routine care (< 30 days)	0.92	0.88	0.90	0.94
Urgent care (1 day)	0.89	0.87	0.87	0.87

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Table D-1—*Continued*

Measure	Region			
	9		10	
	Civilian	Military	Civilian	Military
Preventive care				
Pregnant and did not smoke	0.90	0.76	0.89	0.43*
Know results of blood pressure check	0.94	0.89	0.95	0.94
Breast exam past year (age 40+)	0.62	0.79*	0.73	0.68
Did not chew tobacco past year (all ages)	0.99	0.99	0.96	0.98
Cholesterol test past 5 years	0.71	0.67	0.80	0.79
Dental care past year	0.67	0.60	0.71	0.61
Did not chew tobacco past year (age 18–24)	n/a	n/a	n/a	n/a
Flu shot (age 65+)	0.74	0.76	n/a	n/a
Mammogram past year (age 50+)	0.81	0.83	0.80	0.71
Ever had mammogram (age 40–49)	0.95	0.72*	0.98	0.61*
Mammogram past 2 years (age 50+)	0.92	0.89	0.94	0.87
PAP smear past 3 years	0.92	0.96	0.94	0.90
Ever had PAP test	0.98	0.99	0.98	1.00*
Physical exam past year	0.58	0.57	0.60	0.55
First trimester care	0.96	0.91	n/a	n/a
Prostate check (age 50+)	0.49	0.66	0.68	0.57
Prostate check (age40+/B, 50+W)	0.49	0.66	0.68	0.61
Not smoke (age 18–24)	0.85	0.87	0.78	0.88
Waiting time for an appointment				
Minor care (days)	3.10	2.30	1.86	3.48*
Routine care (days)	11.82	11.60	12.88	10.60*
Urgent care (days)	0.64	0.67	0.57	0.54
Minor care (< 3 days)	0.82	0.86	0.93	0.67*
Routine care (< 30 days)	0.90	0.96	0.81	0.95*
Urgent care (1 day)	0.91	0.88	0.90	0.96

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Table D-1—*Continued*

Measure	Region			
	11		12	
	Civilian	Military	Civilian	Military
Preventive care				
Pregnant and did not smoke	–	–	0.67	0.83
Know results of blood pressure check	0.95	0.94	0.96	0.95
Breast exam past year (age 40+)	0.74	0.71	0.47	0.68
Did not chew tobacco past year (all ages)	0.98	0.99	0.88	1.00*
Cholesterol test past 5 years	0.80	0.80	0.82	0.65*
Dental care past year	0.73	0.60*	0.66	0.70
Did not chew tobacco past year (age 18–24)	–	–	–	–
Flu shot (age 65+)	0.70	0.85*	–	–
Mammogram past year (age 50+)	0.69	0.70	0.57	0.70
Ever had mammogram (age 40–49)	0.76	0.99*	–	–
Mammogram past 2 years (age 50+)	0.81	0.91	0.65	0.90*
PAP smear past 3 years	0.95	0.96	0.94	0.95
Ever had PAP test	0.99	0.98	–	–
Physical exam past year	0.57	0.55	0.59	0.55
First trimester care	–	–	–	–
Prostate check (age 50+)	0.60	0.55	0.75	0.65
Prostate check (age40+/B, 50+W)	0.62	0.55	0.73	0.65
Not smoke (age 18–24)	0.80	0.76	0.53	0.71
Waiting time for an appointment				
Minor care (days)	3.38	2.80	1.63	1.88
Routine care (days)	14.27	14.17	12.92	11.24
Urgent care (days)	0.61	0.64	0.56	0.58
Minor care (< 3 days)	0.78	0.78	0.87	0.86
Routine care (< 30 days)	0.86	0.91	0.99	0.93
Urgent care (1 day)	0.94	0.90	0.99	0.92*

APPENDIX E: REGIONAL QUALITY-OF-CARE INDICATORS

Table E-1 shows quality-of-care measures for the 1998 population, broken down by TRICARE region, source of care, and military status. Items marked with an asterisk (*) indicate a statistically significant difference between the level achieved and the goal. Entries of "n/a" indicate insufficient data for estimate.

Table E-1. Quality-of-Care Measures

Pregnant did not smoke (Goal= .90)

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	n/a	0.90	n/a	n/a	0.87
4	n/a	0.91	n/a	n/a	0.89
6	0.69*	0.91	n/a	n/a	0.86
7/8	0.78	0.92	n/a	n/a	0.90
9	n/a	0.94	n/a	n/a	0.91
10	n/a	n/a	n/a	n/a	0.88
11	n/a	0.84	n/a	n/a	0.88
12	n/a	0.85	n/a	n/a	0.86

Know results of blood pressure check (Goal= .90)

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	0.91*	0.93*	0.96*	0.96*	0.93*
4	0.92*	0.91*	0.95*	0.97*	0.92*
6	0.91*	0.92*	0.96*	0.95*	0.92*
7/8	0.91*	0.90*	0.97*	0.95*	0.91*
9	0.86*	0.89*	0.96*	0.96*	0.89*
10	0.89	0.93*	0.96*	0.97*	0.92*
11	0.90*	0.92*	0.97*	0.95*	0.92*
12	0.90*	0.93*	0.98*	0.88	0.91*

Breast exam past year (age 40+) (Goal= .60)

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	–	0.73*	0.76*	0.67	0.72*
4	–	0.63	0.70*	0.77*	0.66*
6	0.76*	0.68*	0.80*	0.74*	0.72*
7/8	–	0.71*	0.73*	0.81*	0.70*
9	–	0.71*	0.78*	0.69	0.71*
10	–	0.72*	0.71*	–	0.67*
11	–	0.69*	0.72*	0.62	0.66*
12	–	0.58	0.69	–	0.61

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Table E-1—*Continued*

Did not chew tobacco past year (all ages) (Goal= .96)

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	0.87*	0.98*	0.98*	0.96*	0.96*
4	0.88*	0.97*	0.98*	0.97*	0.96*
6	0.87*	0.96*	0.98*	0.99*	0.95*
7/8	0.86*	0.99*	0.99*	0.95*	0.95*
9	0.81*	0.99*	1.00*	1.00*	0.94*
10	0.92*	0.97*	1.00*	1.00*	0.98*
11	0.86*	0.98*	0.99*	0.98*	0.96*
12	0.82*	0.99*	1.00*	0.99*	0.91*

Cholesterol test past 5 years (Goal= .75)

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	0.75*	0.79*	0.93	0.91*	0.85*
4	0.77	0.78*	0.89*	0.86*	0.82*
6	0.77*	0.77*	0.91*	0.87*	0.82*
7/8	0.77*	0.74*	0.91*	0.86*	0.80*
9	0.67*	0.69*	0.92*	0.76	0.75*
10	0.70	0.80*	0.91*	0.88*	0.83*
11	0.75	0.79*	0.92*	0.77	0.81*
12	0.77	0.69*	0.90*	0.72	0.76

Dental care past year (Goal= .70)

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	0.86*	0.62*	0.69	0.67	0.70*
4	0.84*	0.58*	0.70	0.63	0.68*
6	0.84*	0.53*	0.58*	0.54*	0.60*
7/8	0.85*	0.63*	0.68	0.67	0.69*
9	0.83*	0.61*	0.73	0.62	0.70*
10	0.84*	0.64*	0.73	0.59*	0.68
11	0.88*	0.63*	0.67	0.61*	0.68*
12	0.88*	0.64*	0.75	0.65	0.76*

Did not chew tobacco past year (age 17/8–24) (Goal= .96)

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	0.81*	0.98*	–	0.97	0.90*
4	0.82*	0.98	–	–	0.91*
6	0.78*	0.87	–	0.91	0.84*
7/8	0.83*	0.96	–	0.97	0.89*
9	0.68*	1.00*	–	–	0.79*
10	0.91	0.97	–	–	0.95
11	0.80*	0.94	–	–	0.86*
12	0.66*	0.98	–	–	0.77*

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Table E-1—*Continued*

Flu shot (age 65+)

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	–	0.79	0.72	0.68	0.72
4	–	0.65	0.83	0.68	0.77
6	–	0.85	0.79	0.91	0.82
7/8	–	0.82	0.86	0.89	0.84
9	–	0.79	0.85	0.80	0.80
10	–	–	0.73	–	0.73
11	–	0.76	0.80	0.77	0.77
12	–	–	0.79	–	0.72

Mammogram past year (age 50+) (Goal= .60)

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	–	0.70*	0.75*	0.78*	0.73*
4	–	0.61	0.68	0.84*	0.68*
6	–	0.69*	0.76*	0.66	0.69*
7/8	–	0.74*	0.73*	0.84*	0.72*
9	–	0.77*	0.74*	0.72	0.71*
10	–	0.73*	0.75*	–	0.71*
11	–	0.66	0.71*	0.68	0.66
12	–	0.61	0.87*	–	0.73*

Ever had mammogram (age 40–49) (Goal= .7/80)

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	–	0.97*	0.98*	0.98*	0.94*
4	–	0.93*	0.88	0.95*	0.90*
6	0.98*	0.96*	0.97*	0.85	0.94*
7/8	–	0.84	0.98*	0.98*	0.89*
9	–	0.86	–	–	0.85
10	–	0.88	–	–	0.87
11	–	0.96*	–	–	0.95*
12	–	0.89	–	–	0.92*

Mammogram past 2 years (age 50+) (Goal= .60)

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	–	0.89*	0.93*	0.93*	0.91*
4	–	0.77*	0.88*	0.94*	0.85*
6	–	0.89*	0.87*	0.87*	0.87*
7/8	–	0.86*	0.84*	0.96*	0.84*
9	–	0.88*	0.89*	0.97*	0.87*
10	–	0.91*	0.92*	–	0.87*
11	–	0.84*	0.90*	0.88*	0.85*
12	–	0.82*	0.95*	–	0.86*

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Table E-1—*Continued*

PAP smear past 3 years (Goal= .7/85)

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	0.96*	0.93*	0.91*	0.90	0.91*
4	0.98*	0.91*	0.88	0.92*	0.88*
6	0.97*	0.91*	0.91*	0.89	0.90*
7/8	0.94*	0.92*	0.80	0.92*	0.86*
9	0.96*	0.93*	0.90*	0.95*	0.91*
10	0.98*	0.90*	0.88	0.90	0.87
11	0.97*	0.91*	0.85	0.90	0.88*
12	0.97*	0.92*	0.92	0.84	0.91*

Ever had PAP test (Goal= .95)

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	1.00*	0.98*	0.99*	0.99*	0.99*
4	0.99*	0.99*	0.99*	0.99*	0.99*
6	0.99*	0.99*	0.99*	0.99*	0.99*
7/8	0.95	0.99*	0.98*	1.00*	0.98*
9	1.00*	0.98*	0.98*	0.99*	0.98*
10	1.00	1.00*	0.98*	0.99*	0.98*
11	0.98	0.99*	1.00*	0.97*	0.99*
12	0.99*	1.00*	1.00*	1.00	1.00*

Physical exam past year

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	0.42	0.58	0.67	0.67	0.58
4	0.50	0.53	0.62	0.56	0.55
6	0.47	0.54	0.68	0.50	0.55
7/8	0.49	0.53	0.72	0.58	0.57
9	0.44	0.56	0.70	0.59	0.54
10	0.44	0.56	0.60	0.68	0.55
11	0.48	0.53	0.62	0.56	0.53
12	0.45	0.55	0.63	0.58	0.51

First trimester care (Goal= .90)

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	0.88	0.90	–	–	0.91
4	–	0.96*	–	–	0.95*
6	0.91	0.94	–	–	0.92
7/8	0.94	0.90	–	–	0.90
9	0.97*	0.94	–	–	0.95*
10	–	–	–	–	0.93
11	–	0.83	–	–	0.87
12	–	0.91	–	–	0.93

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Table E-1—*Continued*

Prostate check (age40+/B, 50+W)

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	0.42*	0.65*	0.76*	0.79*	0.69*
4	0.56*	0.61*	0.74*	0.67*	0.66*
6	0.46*	0.63*	0.74*	0.82*	0.68*
7/8	0.46*	0.54*	0.69*	0.66*	0.61*
9	–	0.57*	0.77*	0.63*	0.64*
10	–	0.62*	0.63*	0.60*	0.58*
11	–	0.58*	0.69*	0.66*	0.60*
12	–	0.70*	0.55*	–	0.56*

Not smoke (age 17/8–24) (Goal= .7/80)

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	0.75	0.77	–	0.82	0.77
4	0.73	0.77	–	–	0.78
6	0.70*	0.78	–	0.88	0.75
7/8	0.74*	0.74	–	0.76	0.73*
9	0.70*	0.93*	–	–	0.78
10	0.71	0.73	–	–	0.79
11	0.71*	0.75	–	–	0.72*
12	0.70	0.65	–	–	0.70*

Note: Measures are proportions unless otherwise indicated. Entries marked "–" indicate insufficient sample size for estimation.

APPENDIX F: REGIONAL DIFFERENCES IN SATISFACTION WITH CLAIMS PROCESSING

Table F-1 shows survey respondent's claims filing experiences by region, source of care and military status.

Table F-1. Regional Claims Filing

Filed a claim

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	0.35	0.35	0.34	0.31	0.32
4	0.36	0.34	0.34	0.35	0.33
6	0.35	0.34	0.36	0.36	0.34
7/8	0.35	0.36	0.35	0.28	0.32
9	0.25	0.30	0.25	0.29	0.26
10	0.36	0.32	0.26	0.27	0.27
11	0.30	0.35	0.33	0.43	0.33
12	0.28	0.31	0.25	0.36	0.29

Had some problem with a claim

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	0.62	0.55	0.49	0.61	0.55
4	0.66	0.59	0.57	0.49	0.58
6	0.63	0.65	0.48	0.53	0.57
7/8	0.69	0.53	0.52	0.67	0.58
9	0.54	0.51	0.42	0.48	0.49
10	0.57	0.52	0.45	0.78	0.54
11	0.56	0.56	0.40	0.59	0.51
12	0.55	0.43	0.26	n/a	0.46

Had a BIG problem with a claim

Region	AD (All)	Non-AD (Prime)	Non-AD (Civilian)	Non-AD (Other Nonenrolled)	Total
3	0.24	0.17	0.22	0.22	0.21
4	0.29	0.21	0.15	0.18	0.20
6	0.25	0.26	0.09	0.20	0.19
7/8	0.28	0.24	0.11	0.13	0.19
9	0.18	0.17	0.12	0.17	0.16
10	0.27	0.20	0.10	0.25	0.18
11	0.21	0.18	0.10	0.21	0.16
12	0.22	0.11	0.05	n/a	0.15

APPENDIX G. RETIREE ACCESS AND QUALITY OF CARE MEASURES

Regional changes in access and quality of care measures for retirees form 1994 to 1998 are shown in Table G-1. Military retirees and their families' perceptions about TRICARE in 1998 are compared to those of Active Duty and their family members as well as those in comparable civilian health care plans in Table G-2.

Table G-1. Changes in Retiree Access and Quality of Care Measures (1994–1998)

		Source of Care							
		Prime		Civilian		Other Nonenrolled		Total	
Measure	Region	FY94	FY98	FY94	FY98	FY94	FY98	FY94	FY98
Appointment gap (days)	3	16.01	8.47*	8.30	7.85	15.16	10.34*	11.24	8.18*
	4	12.47	7.75*	6.87	7.60	13.97	8.52*	9.75	7.69*
	6	19.00	8.49*	5.71	7.17*	20.62	8.54*	12.39	7.68*
	7/8	11.60	8.78*	7.33	7.87	15.40	7.79*	10.69	8.14*
	9	11.15	7.74*	7.46	7.62	11.02	6.45*	8.79	7.49*
	10	8.15	8.92	9.49	7.95*	16.09	7.51*	10.64	8.16*
	11	16.31	8.83*	7.26	8.68*	15.16	8.35*	10.54	8.70*
	12	8.93	7.85	6.44	6.13	–	–	9.70	6.92
	Total	13.92	8.38*	7.37	7.77*	16.00	8.29*	10.83	7.98*
BP check past year	3	0.83	0.92*	0.90	0.96*	0.92	0.98*	0.84	0.93*
	4	0.81	0.91*	0.89	0.96*	0.91	0.98*	0.81	0.92*
	6	0.79	0.94*	0.91	0.97*	0.92	0.98*	0.83	0.93*
	7/8	0.73	0.91*	0.91	0.94	0.90	0.95	0.82	0.89*
	9	0.81	0.90*	0.93	0.97*	0.90	0.95	0.85	0.90*
	10	0.85	0.92*	0.93	0.96	0.90	0.98*	0.86	0.91*
	11	0.77	0.92*	0.91	0.94	0.91	0.96	0.82	0.90*
	12	0.83	0.92*	0.93	0.96	0.90	0.88	0.82	0.89
	Total	0.81	0.92*	0.91	0.96*	0.91	0.97*	0.83	0.91*
Cholesterol check past year	3	0.57	0.62	0.74	0.73	0.70	0.73	0.62	0.68
	4	0.62	0.57	0.71	0.62*	0.65	0.65	0.59	0.59
	6	0.58	0.65	0.64	0.66	0.67	0.68	0.58	0.63
	7/8	0.51	0.54	0.65	0.69	0.68	0.59	0.58	0.59
	9	0.67	0.58*	0.78	0.73	0.61	0.56	0.66	0.61*
	10	0.66	0.62	0.73	0.66	0.67	0.74	0.65	0.62
	11	0.49	0.54	0.67	0.62	0.60	0.58	0.57	0.56
	12	0.62	0.61	0.74	0.69	0.59	0.66	0.64	0.62
	Total	0.59	0.60	0.70	0.68*	0.67	0.66	0.61	0.62*

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Table G-1—*Continued*

Measure	Region	Source of Care: Prime FY94	Prime FY98	Civilian FY94	Civilian FY98	Other Nonenrolled FY94	Other Nonenrolled FY98	Total FY94	Total FY98
Interpersonal concern of providers	3	0.69	0.90*	0.83	0.95*	0.68	0.93*	0.77	0.93*
	4	0.70	0.93*	0.82	0.95*	0.72	0.90*	0.76	0.94*
	6	0.73	0.91*	0.89	0.96*	0.64	0.81*	0.80	0.93*
	7/8	0.69	0.92*	0.86	0.96*	0.68	0.88*	0.77	0.94*
	9	0.72	0.93*	0.87	0.95*	0.71	0.84	0.81	0.93*
	10	0.76	0.94*	0.88	0.97*	0.67	0.91*	0.83	0.96*
	11	0.79	0.95*	0.88	0.95*	0.62	0.87*	0.81	0.94*
	12	0.79	0.91*	0.94	0.99*	–	–	0.86	0.94*
	Total	0.72	0.92*	0.85	0.95*	0.67	0.87*	0.79	0.94*
Dental care past year	3	0.25	0.60*	0.69	0.68	0.40	0.68*	0.52	0.65*
	4	0.32	0.52*	0.68	0.72	0.43	0.62*	0.52	0.64*
	6	0.31	0.49*	0.64	0.58	0.38	0.53*	0.47	0.52*
	7/8	0.33	0.59*	0.66	0.70	0.36	0.69*	0.49	0.64*
	9	0.37	0.56*	0.77	0.74	0.47	0.55	0.61	0.64*
	10	0.45	0.61*	0.75	0.74	0.41	0.57*	0.58	0.67*
	11	0.30	0.60*	0.68	0.67	0.36	0.59*	0.53	0.62*
	12	0.40	0.55*	0.74	0.78	0.44	0.65*	0.55	0.66*
	Total	0.33	0.56*	0.68	0.68	0.39	0.60*	0.52	0.62*
Satisfied with convenience of treatment location	3	0.74	0.84*	0.90	0.95*	0.72	0.75	0.83	0.89*
	4	0.81	0.87	0.90	0.93	0.76	0.74	0.85	0.89
	6	0.77	0.89*	0.91	0.94	0.68	0.72	0.83	0.89*
	7/8	0.84	0.85	0.90	0.90	0.71	0.71	0.83	0.87
	9	0.86	0.88	0.94	0.95	0.79	0.83	0.89	0.90
	10	0.80	0.85	0.93	0.97*	0.51	0.60	0.83	0.90*
	11	0.87	0.87	0.88	0.91	0.73	0.79	0.85	0.88
	12	0.88	0.90	0.97	0.97			0.90	0.92
	Total	0.81	0.87*	0.91	0.94*	0.71	0.75	0.84	0.89*
Satisfied with time spent with provider	3	0.78	0.83	0.85	0.91*	0.77	0.89*	0.82	0.89*
	4	0.69	0.87*	0.85	0.87	0.78	0.90*	0.80	0.87*
	6	0.74	0.87*	0.92	0.90	0.70	0.75	0.83	0.88*
	7/8	0.74	0.85*	0.89	0.92	0.75	0.87*	0.83	0.90*
	9	0.81	0.89*	0.89	0.89	0.74	0.71	0.85	0.86
	10	0.80	0.90*	0.89	0.94	0.69	0.82	0.84	0.92*
	11	0.85	0.91	0.90	0.93	0.72	0.74	0.85	0.91
	12	0.85	0.90	0.96	0.99*			0.90	0.95*
	Total	0.77	0.86*	0.88	0.91*	0.74	0.81*	0.82	0.89*

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Table G-1—*Continued*

Measure	Region	Source of Care: Prime FY94	Prime FY98	Civilian FY94	Civilian FY98	Other Nonenrolled FY94	Other Nonenrolled FY98	Total FY94	Total FY98
Satisfied with convenience of hours	3	0.82	0.89*	0.93	0.97*	0.77	0.86*	0.88	0.93*
	4	0.86	0.92*	0.93	0.94	0.82	0.86	0.88	0.92*
	6	0.82	0.90*	0.92	0.97*	0.74	0.81	0.87	0.93*
	7/8	0.83	0.87	0.95	0.97	0.79	0.92*	0.88	0.94*
	9	0.90	0.93	0.96	0.96	0.84	0.86	0.92	0.93
	10	0.90	0.90	0.96	0.96	0.79	0.84	0.92	0.93
	11	0.93	0.94	0.94	0.99*	0.78	0.83	0.90	0.95*
	12	0.78	0.90*	0.99	0.98			0.91	0.94
	Total	0.85	0.90*	0.94	0.97*	0.79	0.85*	0.89	0.93*
Satisfied with access to care if needed	3	0.67	0.84*	0.89	0.94*	0.57	0.55	0.78	0.86*
	4	0.65	0.81*	0.92	0.94	0.56	0.46	0.79	0.85*
	6	0.58	0.82*	0.91	0.94	0.57	0.54	0.76	0.84*
	7/8	0.69	0.86*	0.91	0.95	0.61	0.65	0.79	0.89*
	9	0.82	0.88	0.94	0.96	0.77	0.75	0.88	0.90
	10	0.79	0.80	0.92	0.93	0.58	0.63	0.83	0.87
	11	0.76	0.85*	0.94	0.96	0.59	0.61	0.83	0.89
	12	0.75	0.84	0.98	1.00			0.86	0.87
	Total	0.70	0.84*	0.91	0.94*	0.60	0.59	0.80	0.86*
Satisfied with access to specialist	3	0.59	0.81*	0.87	0.95*	0.44	0.52	0.73	0.86*
	4	0.56	0.76*	0.90	0.93	0.47	0.52	0.74	0.84*
	6	0.52	0.79*	0.91	0.91	0.47	0.51	0.73	0.81*
	7/8	0.66	0.82*	0.87	0.94*	0.54	0.59	0.75	0.87*
	9	0.75	0.79	0.92	0.92	0.59	0.62	0.82	0.83
	10	0.68	0.79*	0.93	0.94	0.51	0.63	0.80	0.87*
	11	0.69	0.79*	0.93	0.94	0.58	0.65	0.81	0.87
	12	0.75	0.74	0.95	0.99*			0.82	0.84*
	Total	0.62	0.79*	0.90	0.93*	0.50	0.55	0.75	0.85*
Satisfied with access to hospital care	3	0.79	0.89*	0.93	0.97*	0.62	0.67	0.84	0.91*
	4	0.73	0.86*	0.94	0.96	0.68	0.53*	0.85	0.89*
	6	0.71	0.87*	0.96	0.95	0.72	0.72	0.86	0.89*
	7/8	0.82	0.90*	0.95	0.97	0.75	0.74	0.88	0.93*
	9	0.85	0.91	0.97	0.95	0.75	0.82	0.89	0.92
	10	0.81	0.81	0.96	0.94	0.60	0.65	0.87	0.88
	11	0.87	0.93	0.97	0.99	0.67	0.63	0.89	0.93
	12	0.90	0.87	0.97	0.98			0.91	0.91
	Total	0.79	0.88*	0.95	0.96	0.69	0.69	0.86	0.91*

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Table G-1—*Continued*

Measure	Region	Source of Care: Prime FY94	Prime FY98	Civilian FY94	Civilian FY98	Other Nonenrolled FY94	Other Nonenrolled FY98	Total FY94	Total FY98
Satisfied with access to emergency care	3	0.78	0.83	0.92	0.96*	0.65	0.75	0.84	0.90*
	4	0.77	0.85*	0.92	0.94	0.72	0.52*	0.84	0.87*
	6	0.70	0.83*	0.92	0.94	0.67	0.71	0.82	0.88
	7/8	0.85	0.83	0.85	0.96*	0.70	0.73	0.83	0.89*
	9	0.83	0.88	0.94	0.93	0.78	0.71	0.88	0.88
	10	0.84	0.81	0.93	0.95	0.62	0.74	0.86	0.89
	11	0.84	0.88	0.93	0.96	0.73	0.74	0.88	0.91
	12	0.85	0.89	0.96	0.97			0.88	0.91
	Total	0.79	0.84*	0.92	0.95*	0.70	0.70	0.84	0.89*
Satisfied with ease of making an appointment	3	0.59	0.80*	0.92	0.96*	0.50	0.64*	0.76	0.87*
	4	0.52	0.82*	0.94	0.98*	0.49	0.50	0.76	0.87*
	6	0.47	0.78*	0.94	0.98*	0.39	0.56*	0.71	0.86*
	7/8	0.64	0.86*	0.96	0.96	0.48	0.63*	0.77	0.89*
	9	0.79	0.89*	0.96	0.95	0.72	0.72	0.88	0.89
	10	0.83	0.84	0.92	0.96	0.60	0.74	0.84	0.90
	11	0.59	0.84*	0.97	0.97	0.45	0.55	0.79	0.88*
	12	0.74	0.82	0.99	1.00			0.80	0.85
	Total	0.62	0.82*	0.94	0.96*	0.48	0.60*	0.77	0.87*
Satisfied with waiting time to see provider	3	0.68	0.75	0.83	0.86	0.56	0.64	0.73	0.80
	4	0.63	0.77*	0.84	0.78*	0.61	0.55	0.74	0.74
	6	0.62	0.78*	0.84	0.85	0.58	0.67	0.72	0.80*
	7/8	0.63	0.82*	0.83	0.87	0.65	0.79*	0.74	0.84*
	9	0.71	0.81*	0.88	0.89	0.65	0.66	0.81	0.83
	10	0.76	0.78	0.89	0.88	0.65	0.85*	0.81	0.85
	11	0.71	0.83*	0.90	0.92	0.63	0.70	0.80	0.87*
	12	0.76	0.77	0.93	0.95			0.81	0.84
	Total	0.67	0.78*	0.85	0.85	0.61	0.67*	0.75	0.81*
Satisfied with appointment gap	3	0.59	0.77*	0.88	0.92*	0.51	0.63*	0.75	0.84*
	4	0.62	0.76*	0.90	0.89	0.55	0.49	0.78	0.81*
	6	0.53	0.77*	0.91	0.91	0.46	0.60*	0.72	0.82*
	7/8	0.64	0.84*	0.91	0.91	0.51	0.71*	0.74	0.86*
	9	0.74	0.81	0.91	0.90	0.72	0.71	0.85	0.84
	10	0.79	0.77	0.90	0.91	0.62	0.70	0.82	0.85
	11	0.73	0.80	0.90	0.92	0.58	0.64	0.79	0.86
	12	0.78	0.80	0.97	0.99*			0.83	0.88
	Total	0.64	0.79*	0.90	0.91	0.53	0.63*	0.76	0.84*

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Table G-1—*Continued*

Measure	Region	Source of Care: Prime FY94	Prime FY98	Civilian FY94	Civilian FY98	Other Nonenrolled FY94	Other Nonenrolled FY98	Total FY94	Total FY98
Satisfied with availability of health care information by phone	3	0.51	0.77*	0.78	0.90*	0.44	0.58*	0.67	0.82*
	4	0.49	0.77*	0.80	0.85	0.46	0.51	0.68	0.78*
	6	0.60	0.74*	0.85	0.87	0.39	0.49	0.69	0.78*
	7/8	0.53	0.81*	0.84	0.89	0.51	0.68*	0.69	0.84*
	9	0.69	0.77	0.84	0.90*	0.54	0.68	0.76	0.83*
	10	0.73	0.73	0.85	0.90	0.48	0.60	0.77	0.83
	11	0.65	0.82*	0.86	0.88	0.51	0.56	0.75	0.83*
	12	0.67	0.76	0.92	0.98*			0.76	0.86*
	Total	0.58	0.77*	0.82	0.88*	0.45	0.56*	0.69	0.81*
Satisfied with availability of prescription services	3	0.89	0.88	0.92	0.92	0.85	0.86	0.89	0.90
	4	0.88	0.90	0.93	0.90	0.86	0.88	0.89	0.90
	6	0.85	0.86	0.90	0.92	0.83	0.86	0.87	0.89
	7/8	0.82	0.87	0.96	0.96	0.86	0.91	0.91	0.93
	9	0.85	0.91	0.95	0.94	0.85	0.93*	0.92	0.93
	10	0.87	0.85	0.94	0.95	0.82	0.95*	0.90	0.92
	11	0.89	0.90	0.96	0.94	0.76	0.85	0.90	0.92
	12	0.81	0.92*	0.95	0.97			0.92	0.95*
	Total	0.86	0.88*	0.93	0.93	0.83	0.89*	0.89	0.91*
Satisfied with thoroughness of exam	3	0.80	0.88*	0.89	0.95*	0.74	0.91*	0.84	0.92*
	4	0.79	0.88*	0.91	0.95*	0.81	0.83	0.86	0.92*
	6	0.74	0.88*	0.95	0.93	0.75	0.82	0.87	0.90*
	7/8	0.78	0.86*	0.93	0.98*	0.76	0.81	0.87	0.93*
	9	0.80	0.90*	0.92	0.93	0.80	0.85	0.88	0.91*
	10	0.83	0.87	0.94	0.93	0.85	0.88	0.90	0.91
	11	0.91	0.92	0.92	0.95	0.79	0.89	0.89	0.94
	12	0.77	0.88*	0.98	1.00			0.88	0.90*
	Total	0.80	0.88*	0.92	0.95*	0.77	0.85*	0.86	0.91*
Satisfied with ability to diagnose	3	0.73	0.86*	0.90	0.95*	0.77	0.90*	0.84	0.92*
	4	0.76	0.84*	0.90	0.93	0.79	0.83	0.86	0.90*
	6	0.79	0.87*	0.91	0.94	0.75	0.83	0.85	0.90*
	7/8	0.80	0.83	0.90	0.90	0.76	0.86*	0.85	0.88
	9	0.87	0.90	0.94	0.95	0.81	0.85	0.91	0.92
	10	0.85	0.92*	0.93	0.97*	0.82	0.88	0.90	0.95*
	11	0.89	0.88	0.88	0.91	0.80	0.87	0.86	0.90
	12	0.83	0.87	0.97	0.97			0.88	0.89
	Total	0.80	0.87*	0.91	0.94*	0.77	0.85*	0.86	0.90*

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Table G-1—*Continued*

Measure	Region	Source of Care: Prime FY94	Prime FY98	Civilian FY94	Civilian FY98	Other Nonenrolled FY94	Other Nonenrolled FY98	Total FY94	Total FY98
Satisfied with skill of provider	3	0.82	0.90*	0.93	0.97*	0.82	0.92*	0.88	0.94*
	4	0.84	0.89	0.93	0.94	0.85	0.91*	0.89	0.93*
	6	0.86	0.92*	0.92	0.97*	0.83	0.88	0.89	0.94*
	7/8	0.80	0.87	0.95	0.97	0.83	0.94*	0.90	0.94*
	9	0.89	0.93	0.96	0.96	0.83	0.92	0.92	0.94
	10	0.90	0.93	0.96	0.96	0.90	0.85	0.94	0.94
	11	0.94	0.94	0.94	0.99*	0.83	0.87	0.91	0.96*
	12	0.77	0.91*	0.99	0.98			0.91	0.93*
	Total	0.86	0.91*	0.94	0.97*	0.83	0.90*	0.90	0.94*
Satisfied with thoroughness of treatment	3	0.85	0.88	0.89	0.96*	0.78	0.91*	0.85	0.94*
	4	0.80	0.86	0.93	0.97*	0.79	0.86	0.87	0.93*
	6	0.80	0.89*	0.96	0.97	0.77	0.79	0.88	0.92*
	7/8	0.82	0.88	0.91	0.96*	0.82	0.86	0.88	0.93*
	9	0.84	0.90	0.94	0.92	0.86	0.89	0.91	0.91
	10	0.86	0.91	0.95	0.95	0.86	0.89	0.91	0.93
	11	0.95	0.91*	0.96	0.96	0.79	0.87	0.91	0.94
	12	0.87	0.90	0.98	0.99			0.90	0.91
	Total	0.84	0.89*	0.93	0.96*	0.80	0.86*	0.88	0.93*
Satisfied with outcome of health care	3	0.85	0.87	0.89	0.96*	0.82	0.91*	0.86	0.93*
	4	0.84	0.87	0.93	0.95	0.81	0.90*	0.87	0.92*
	6	0.80	0.90*	0.96	0.95	0.80	0.82	0.88	0.91*
	7/8	0.81	0.88*	0.92	0.97*	0.79	0.86	0.87	0.93*
	9	0.85	0.89	0.94	0.94	0.86	0.89	0.91	0.92
	10	0.84	0.89	0.93	0.95	0.86	0.88	0.90	0.92
	11	0.92	0.92	0.93	0.95	0.81	0.79	0.89	0.92
	12	0.83	0.90	0.97	0.99*			0.90	0.91
	Total	0.84	0.88*	0.92	0.95*	0.80	0.86*	0.88	0.92*
Satisfied with overall quality of care	3	0.85	0.88	0.90	0.97*	0.79	0.88*	0.86	0.93*
	4	0.79	0.89*	0.94	0.97*	0.80	0.83	0.87	0.94*
	6	0.74	0.91*	0.95	0.97	0.76	0.75	0.87	0.92*
	7/8	0.85	0.89	0.94	0.97*	0.81	0.84	0.89	0.93*
	9	0.86	0.94*	0.95	0.97	0.86	0.92	0.92	0.95*
	10	0.87	0.91	0.95	0.95	0.86	0.78	0.91	0.92
	11	0.92	0.93	0.94	0.97	0.81	0.81	0.90	0.94
	12	0.89	0.91	0.98	0.99			0.91	0.92
	Total	0.83	0.90*	0.94	0.97*	0.80	0.83	0.88	0.93*

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Table G-1—*Continued*

Measure	Region	Source of Care: Prime FY94	Prime FY98	Civilian FY94	Civilian FY98	Other Nonenrolled FY94	Other Nonenrolled FY98	Total FY94	Total FY98
Satisfied with explanation of procedures	3	0.80	0.86	0.87	0.96*	0.77	0.84	0.84	0.92*
	4	0.79	0.89*	0.91	0.94	0.82	0.83	0.86	0.91*
	6	0.79	0.87*	0.94	0.95	0.78	0.77	0.88	0.90
	7/8	0.80	0.84	0.92	0.96*	0.76	0.82	0.85	0.91
	9	0.84	0.92*	0.93	0.95	0.86	0.86	0.90	0.93*
	10	0.86	0.88	0.92	0.93	0.87	0.89	0.90	0.91
	11	0.95	0.92	0.94	0.96	0.77	0.77	0.90	0.92
	12	0.80	0.89	0.96	0.99*			0.90	0.91
	Total	0.82	0.88*	0.91	0.95*	0.79	0.81	0.87	0.91*
Satisfied with explanation of medical tests	3	0.81	0.86	0.87	0.94*	0.79	0.88*	0.84	0.91*
	4	0.76	0.86*	0.90	0.91	0.83	0.87	0.85	0.89*
	6	0.78	0.87*	0.94	0.93	0.78	0.79	0.87	0.89
	7/8	0.79	0.87*	0.93	0.96	0.78	0.83	0.86	0.92
	9	0.85	0.90	0.92	0.94	0.84	0.83	0.89	0.91
	10	0.83	0.87	0.91	0.93	0.88	0.89	0.89	0.91
	11	0.93	0.93	0.92	0.94	0.78	0.79	0.89	0.92
	12	0.86	0.87	0.96	0.99*			0.90	0.90
	Total	0.81	0.88*	0.91	0.94*	0.79	0.83	0.86	0.91*
Satisfied with attention by provider	3	0.79	0.88*	0.87	0.95*	0.78	0.89*	0.84	0.93*
	4	0.82	0.89*	0.87	0.94*	0.82	0.89*	0.84	0.93*
	6	0.78	0.90*	0.92	0.98*	0.73	0.86	0.85	0.94*
	7/8	0.75	0.91*	0.91	0.94	0.76	0.90*	0.84	0.93*
	9	0.84	0.92*	0.91	0.94	0.82	0.85	0.88	0.92*
	10	0.86	0.95*	0.92	0.94	0.79	0.87	0.89	0.94*
	11	0.92	0.95	0.92	0.94	0.76	0.90*	0.89	0.94*
	12	0.88	0.92	0.95	0.98			0.91	0.94
	Total	0.81	0.90*	0.90	0.95*	0.77	0.87*	0.85	0.93*
Satisfied with admin staff courtesy	3	0.82	0.94*	0.92	0.97*	0.79	0.96*	0.87	0.96*
	4	0.83	0.96*	0.90	0.99*	0.84	0.97*	0.86	0.98*
	6	0.84	0.95*	0.94	0.99*	0.77	0.96*	0.88	0.98*
	7/8	0.75	0.95*	0.92	0.99*	0.81	0.95*	0.86	0.98*
	9	0.87	0.96*	0.95	0.99*	0.81	0.89	0.91	0.97*
	10	0.88	0.96*	0.95	0.99*	–	–	0.91	0.98*
	11	0.84	0.97*	0.97	0.98	0.74	0.99*	0.90	0.98*
	12	0.81	0.92	0.98	1.00	–	–	0.89	0.95*
	Total	0.84	0.95*	0.94	0.98*	0.79	0.95*	0.88	0.97*

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Table G-1—*Continued*

Measure	Region	Source of Care: Prime FY94	Prime FY98	Civilian FY94	Civilian FY98	Other Nonenrolled FY94	Other Nonenrolled FY98	Total FY94	Total FY98
Flu shot past year	3	0.26	0.39*	0.46	0.56*	0.41	0.52*	0.37	0.49*
	4	0.29	0.38*	0.43	0.58*	0.43	0.56*	0.37	0.51*
	6	0.45	0.51	0.47	0.57*	0.45	0.58*	0.43	0.54*
	7/8	0.41	0.48	0.48	0.65*	0.55	0.63	0.44	0.57*
	9	0.33	0.48*	0.54	0.68*	0.48	0.54	0.45	0.57*
	10	0.35	0.43	0.54	0.58	0.57	0.52	0.47	0.52
	11	0.40	0.53*	0.49	0.62*	0.44	0.58*	0.43	0.57*
	12	0.29	0.40	0.59	0.63	0.54	0.63	0.47	0.53
	Total	0.35	0.45*	0.48	0.60*	0.47	0.56*	0.42	0.53*
Mammogram past year (40+)	3	0.70	0.71	0.74	0.77	0.70	0.72	0.68	0.73
	4	0.64	0.61	0.72	0.67	0.68	0.76	0.65	0.65
	6	0.50	0.67*	0.68	0.72	0.53	0.65	0.58	0.67*
	7/8	0.71	0.69	0.73	0.69	0.77	0.83	0.67	0.69
	9	0.77	0.71	0.73	0.71	0.76	0.66	0.70	0.67
	10	0.78	0.70	0.74	0.72	–	–	0.72	0.68
	11	0.58	0.61	0.71	0.69	0.74	0.56*	0.65	0.62
	12	–	–	0.50	0.78*	–	–	0.55	0.66*
	Total	0.66	0.67	0.72	0.72	0.70	0.71	0.66	0.68*
Mammogram past year (50+)	3	0.76	0.72	0.76	0.77	0.74	0.80	0.70	0.74
	4	0.62	0.61	0.74	0.69	0.74	0.81	0.68	0.68
	6	0.44	0.71*	0.68	0.78	0.62	0.70	0.59	0.72*
	7/8	0.74	0.74	0.75	0.75	0.75	0.84	0.70	0.72
	9	0.79	0.78	0.75	0.73	0.72	0.69	0.72	0.71
	10	0.83	0.76	0.78	0.76	–	–	0.76	0.72
	11	0.62	0.64	0.70	0.72	0.81	0.66*	0.68	0.65
	12	–	–	0.40	0.85*	–	–	0.56	0.74*
	Total	0.68	0.70*	0.74	0.75	0.73	0.75	0.68	0.71*
PAP test past year	3	0.68	0.65	0.69	0.66	0.71	0.68	0.66	0.64
	4	0.65	0.67	0.70	0.59*	0.72	0.67	0.64	0.60
	6	0.68	0.64	0.67	0.70	0.64	0.63	0.64	0.64
	7/8	0.79	0.70*	0.67	0.60	0.72	0.69	0.64	0.62
	9	0.73	0.70	0.70	0.67	0.77	0.60*	0.68	0.63
	10	0.72	0.66	0.71	0.59*	–	–	0.67	0.58*
	11	0.69	0.58	0.74	0.59*	0.73	0.60	0.68	0.57*
	12	–	–	0.58	0.68	–	–	0.62	0.59
	Total	0.70	0.65	0.69	0.63*	0.72	0.65	0.65	0.62*

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Table G-1—*Continued*

Measure	Region	Source of Care: Prime FY94	Prime FY98	Civilian FY94	Civilian FY98	Other Nonenrolled FY94	Other Nonenrolled FY98	Total FY94	Total FY98
Physical exam past year	3	0.43	0.59*	0.71	0.68	0.61	0.71*	0.57	0.63*
	4	0.47	0.56*	0.68	0.61	0.58	0.56	0.55	0.56
	6	0.49	0.58	0.67	0.69	0.56	0.50	0.56	0.59
	7/8	0.44	0.54*	0.72	0.73	0.60	0.61	0.58	0.61
	9	0.60	0.60	0.72	0.68	0.57	0.67	0.62	0.61
	10	0.64	0.59	0.70	0.61*	0.62	0.67	0.61	0.58
	11	0.42	0.50	0.73	0.63*	0.55	0.57	0.58	0.55*
	12	0.47	0.55	0.71	0.65	0.47	0.60	0.56	0.57
	Total	0.50	0.57*	0.70	0.67*	0.57	0.61	0.58	0.59*
Prostate check past year	3	0.48	0.66*	0.69	0.78	0.72	0.79	0.59	0.71*
	4	0.61	0.61	0.71	0.74	0.70	0.67	0.60	0.66
	6	0.57	0.65	0.72	0.74	0.74	0.80	0.62	0.69
	7/8	0.52	0.56	0.76	0.70	0.77	0.64*	0.67	0.61
	9	0.64	0.57	0.75	0.77	0.69	0.63	0.66	0.65
	10	0.74	0.62	0.81	0.65*	0.75	0.60	0.72	0.59*
	11	0.52	0.57	0.72	0.69	0.65	0.65	0.62	0.62
	12	–	–	0.77	0.57*	–	–	0.58	0.56
	Total	0.58	0.61*	0.74	0.73	0.71	0.71	0.64	0.66*
Fewer than 3 calls to get appointment	3	0.62	0.90*	0.75	0.98*	0.56	0.82*	0.69	0.94*
	4	0.47	0.86*	0.77	0.97*	0.55	0.78*	0.68	0.94*
	6	0.59	0.84*	0.75	0.97*	0.39	0.80*	0.62	0.91*
	7/8	0.63	0.93*	0.76	0.97*	0.56	0.76*	0.68	0.95*
	9	0.66	0.89*	0.76	0.98*	0.67	0.89*	0.73	0.94*
	10	0.69	0.88*	0.75	0.95*	0.62	0.93*	0.70	0.93*
	11	0.56	0.91*	0.80	0.97*	0.55	0.73*	0.71	0.93*
	12	0.70	0.88*	0.79	0.98*	–	–	0.67	0.92*
	Total	0.60	0.88*	0.76	0.97*	0.52	0.82*	0.68	0.93*
Used ER past year	3	0.47	0.33*	0.34	0.23*	0.49	0.35*	0.39	0.28*
	4	0.51	0.29*	0.32	0.17*	0.48	0.41	0.39	0.25*
	6	0.39	0.36	0.29	0.25	0.47	0.43	0.36	0.32
	7/8	0.57	0.30*	0.30	0.21*	0.52	0.31*	0.40	0.25*
	9	0.40	0.29*	0.34	0.25*	0.41	0.25*	0.36	0.26*
	10	0.24	0.25	0.34	0.27	0.45	0.40	0.35	0.28
	11	0.49	0.31*	0.35	0.20*	0.48	0.30*	0.41	0.25*
	12	0.39	0.28	0.32	0.18*	0.52	0.47	0.42	0.27*
	Total	0.43	0.31*	0.32	0.22*	0.48	0.36*	0.38	0.28*

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Table G-1—*Continued*

Measure	Region	Source of Care: Prime FY94	Prime FY98	Civilian FY94	Civilian FY98	Other Nonenrolled FY94	Other Nonenrolled FY98	Total FY94	Total FY98
Visited health care provider	3	0.92	0.88*	0.94	0.86*	0.83	0.97*	0.90	0.89*
	4	0.92	0.91	0.96	0.85*	0.83	0.96*	0.92	0.88*
	6	0.94	0.93	0.94	0.81*	0.81	0.97*	0.89	0.87
	7/8	0.94	0.93	0.95	0.79*	0.88	0.98*	0.91	0.86*
	9	0.93	0.91	0.94	0.85*	0.80	0.99*	0.90	0.90
	10	0.87	0.91	0.93	0.82*	0.84	0.97*	0.88	0.87*
	11	0.89	0.94	0.93	0.83*	0.79	0.97*	0.88	0.88
	12	0.95	0.93	0.95	0.74*	0.89	0.94	0.91	0.84*
	Total	0.92	0.91	0.94	0.83*	0.83	0.97*	0.90	0.88*
Waited less than 30 minutes in provider office	3	0.67	0.78*	0.83	0.80	0.67	0.73	0.77	0.79*
	4	0.73	0.81	0.81	0.78	0.72	0.75	0.77	0.78
	6	0.75	0.79	0.86	0.81	0.63	0.82*	0.78	0.81*
	7/8	0.76	0.87*	0.88	0.86	0.81	0.93*	0.84	0.87*
	9	0.80	0.86	0.91	0.90	0.68	0.75	0.86	0.87
	10	0.87	0.81	0.95	0.90*	0.68	0.81	0.89	0.87
	11	0.80	0.89*	0.94	0.92	0.69	0.81	0.87	0.90*
	12	0.81	0.87	0.94	0.95	–	–	0.83	0.89
	Total	0.77	0.82*	0.87	0.84	0.70	0.79*	0.81	0.83*

* Indicates statistically significant change from 1994 ($p < 0.05$).

Table G-2. Comparison Of Retiree Perceptions With Other Populations

Measure	Source of Care	Military Status/Health Care System[1]			
		Retirees		AD, ADFM	
		MHS	NCBD	MHS	NCBD
Doctor explained things clearly	Military PCM	0.94	0.95*	0.90	0.92
	Civilian PCM	0.94	0.95*	0.90	0.91
	Civilian Care Only	0.96	0.97	0.96	0.96
	Other Nonenrolled	0.93	0.96*	0.86	0.91
	Total	0.95	0.95	0.90	0.90
Doctor listens carefully	Military PCM	0.90	0.93*	0.83	0.87*
	Civilian PCM	0.90	0.93*	0.81	0.86*
	Civilian Care Only	0.95	0.97	0.92	0.95*
	Other Nonenrolled	0.89	0.95*	0.79	0.89*
	Total	0.93	0.94	0.83	0.85
Doctor respected comments	Military PCM	0.92	0.94*	0.85	0.88
	Civilian PCM	0.93	0.94	0.84	0.87
	Civilian Care Only	0.95	0.97*	0.92	0.95*
	Other Nonenrolled	0.93	0.95*	0.82	0.86
	Total	0.94	0.95*	0.86	0.87
Doctor spent enough time	Military PCM	0.85	0.89*	0.78	0.83*
	Civilian PCM	0.88	0.89*	0.77	0.80
	Civilian Care Only	0.91	0.94	0.87	0.91*
	Other Nonenrolled	0.85	0.91*	0.78	0.86*
	Total	0.88	0.91*	0.78	0.82*
Doctor's staff courteous and respectful	Military PCM	0.95	0.96*	0.87	0.88
	Civilian PCM	0.95	0.96*	0.86	0.89*
	Civilian Care Only	0.98	0.98	0.93	0.93
	Other Nonenrolled	0.97	0.96*	0.85	0.84
	Total	0.97	0.96*	0.88	0.81*
Doctor's staff helpful	Military PCM	0.91	0.92*	0.80	0.82
	Civilian PCM	0.92	0.92	0.78	0.79
	Civilian Care Only	0.96	0.95	0.90	0.87
	Other Nonenrolled	0.92	0.93*	0.76	0.78
	Total	0.95	0.92*	0.80	0.74*
Filed a claim	Military PCM	0.32	0.28*	0.34	0.30*
	Civilian PCM	0.28	0.28	0.42	0.42
	Civilian Care Only	0.32	0.27*	0.43	0.37*
	Other Nonenrolled	0.32	0.24*	0.38	0.29*
	Total	0.32	0.28*	0.35	0.30*

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Table G-2—*Continued*

Measure	Source of Care	Military Status/Health Care System			
		Retirees		AD, ADFM	
		MHS	NCBD	MHS	NCBD
Get routine appointment as soon as wanted	Military PCM	0.79	0.85*	0.64	0.72*
	Civilian PCM	0.79	0.85*	0.65	0.75*
	Civilian Care Only	0.90	0.92*	0.79	0.83*
	Other Nonenrolled	0.81	0.85*	0.62	0.68
	Total	0.86	0.87*	0.65	0.65
Had a BIG problem with claim processing	Military PCM	0.22	0.12*	0.24	0.13*
	Civilian PCM	0.18	0.14	0.17	0.13*
	Civilian Care Only	0.13	0.12*	0.19	0.18
	Other Nonenrolled	0.17	0.17	0.23	0.23
	Total	0.15	0.13*	0.23	0.20
Had a problem with claim processing	Military PCM	0.57	0.41*	0.60	0.44*
	Civilian PCM	0.55	0.42*	0.52	0.39*
	Civilian Care Only	0.45	0.38*	0.54	0.47*
	Other Nonenrolled	0.56	0.45	0.53	0.42
	Total	0.50	0.40*	0.59	0.49*
How often received help by phone	Military PCM	0.86	0.89*	0.68	0.74*
	Civilian PCM	0.81	0.89*	0.66	0.79*
	Civilian Care Only	0.93	0.91	0.87	0.83
	Other Nonenrolled	0.85	0.92*	0.65	0.79*
	Total	0.91	0.89*	0.69	0.67
Problem in getting referral	Military PCM	0.70	0.79*	0.60	0.71*
	Civilian PCM	0.73	0.79*	0.65	0.73*
	Civilian Care Only	0.89	0.88*	0.74	0.72
	Other Nonenrolled	0.76	0.83*	0.66	0.75*
	Total	0.83	0.81*	0.61	0.58
Rating of health care	Military PCM	7.95	8.41*	6.69	7.16*
	Civilian PCM	8.07	8.39*	7.13	7.46*
	Civilian Care Only	8.45	8.77*	7.79	8.11*
	Other Nonenrolled	8.07	8.47*	6.91	7.31*
	Total	8.28	8.52*	6.77	7.01*
Rating of health insurance plan	Military PCM	6.92	7.95*	5.73	6.76*
	Civilian PCM	7.19	7.82*	6.52	7.14*
	Civilian Care Only	7.57	8.32*	6.11	6.86*
	Other Nonenrolled	7.03	7.89*	5.93	6.79*
	Total	7.34	8.07*	5.77	6.50*

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Table G-2—*Continued*

Measure	Source of Care	Military Status/Health Care System			
		Retirees		AD, ADFM	
		MHS	NCBD	MHS	NCBD
Rating of personal doctor	Military PCM	8.10	8.36*	7.77	8.03*
	Civilian PCM	8.44	8.31*	7.96	7.84*
	Civilian Care Only	8.46	8.69	8.28	8.50*
	Other Nonenrolled	8.40	8.28	7.94	7.82
	Total	8.39	8.49*	7.85	7.95
Rating of specialist	Military PCM	8.04	8.45*	7.37	7.78*
	Civilian PCM	8.19	8.47*	7.51	7.79*
	Civilian Care Only	8.53	8.74	8.16	8.37*
	Other Nonenrolled	8.23	8.70*	7.64	8.11*
	Total	8.38	8.61*	7.47	7.70*
See doctor for illnesses/injury as soon as wanted	Military PCM	0.82	0.88*	0.66	0.77*
	Civilian PCM	0.81	0.90*	0.69	0.81*
	Civilian Care Only	0.92	0.92	0.81	0.82
	Other Nonenrolled	0.84	0.92*	0.66	0.80*
	Total	0.88	0.89*	0.67	0.69
Used ER past 12 months	Military PCM	0.30	0.14*	0.32	0.14*
	Civilian PCM	0.33	0.13*	0.36	0.14*
	Civilian Care Only	0.23	0.12*	0.25	0.14*
	Other Nonenrolled	0.37	0.13*	0.38	0.13*
	Total	0.27	0.12*	0.32	0.15*
Visited doctor's office for care	Military PCM	0.84	0.83*	0.74	0.72
	Civilian PCM	0.87	0.86*	0.90	0.89
	Civilian Care Only	0.83	0.87	0.87	0.90*
	Other Nonenrolled	0.97	0.89	0.91	0.68*
	Total	0.86	0.84*	0.76	0.74*

[1] Abbreviations: AD (active duty); ADFM (active duty family members)

* Indicates statistically significant difference from military retirees and their families ($p < 0.05$).

APPENDIX H: CHANGES IN ACCESS AND QUALITY-OF-CARE OUTCOMES IN REGION 11: 1994–1998

Table H-1 shows three-year trends for access and quality-of-care indicators, which were estimated based on 1998 population characteristics. Entries marked with an asterisk (*) indicate a statistically significant difference ($p<0.05$) between the estimate for that FY and the preceding one. Where the estimate for FY94 is marked with an #, this indicates a statistically significant linear trend over the time period. The general pattern of results is for a rising trend in perceived satisfaction with access and quality of care from the baseline year (1994). As Table H-1 shows, the greatest increases occurred between 1994 and 1996.

Table H-1. Four-Year Trends for Access and Quality of Care in Region 11

	Military Status (Source of Care)			
	AD (All)			
Measure/Years Into TRICARE	FY94	FY96	FY97	FY98
Satisfied with appointment scale	0.32#	0.44*	0.46	0.59*
Cholesterol check past year	0.45	0.39	0.42	0.38
Interpersonal concern of providers	0.47#	0.58*	0.60	0.79*
Dental care past year	0.89	0.92	0.88*	0.88
Satisfied with convenience of treatment location	0.81	0.87	0.86	0.87
Satisfied with time spent with provider	0.61#	0.70	0.67	0.77*
Satisfied with convenience of hours	0.63#	0.70	0.74	0.78
Satisfied with access to care if needed	0.59#	0.67	0.69	0.73
Satisfied with access to specialist	0.38#	0.45	0.54	0.61
Satisfied with access to hospital care	0.67#	0.83*	0.84	0.80
Satisfied with access to emergency care	0.76	0.84*	0.82	0.81
Satisfied with ease of making an appointment	0.45#	0.57*	0.64	0.69
Satisfied with waiting time to see provider	0.42#	0.50	0.58	0.67*
Satisfied with appointment gap	0.55#	0.64	0.60	0.69*
Satisfied with availability of health care information by phone	0.38#	0.46	0.53	0.67*
Satisfied with availability of prescription services	0.75#	0.74	0.82*	0.86
Satisfied with thoroughness of exam	0.63#	0.69	0.78*	0.79
Satisfied with ability to diagnose	0.64#	0.63	0.72*	0.75
Satisfied with skill of provider	0.71#	0.70	0.80*	0.81
Satisfied with thoroughness of treatment	0.68#	0.65	0.75*	0.78
Satisfied with outcome of health care	0.63#	0.69	0.74	0.80*
Satisfied with overall quality of care	0.66#	0.68	0.77*	0.80
Satisfied with explanation of procedures	0.66#	0.76*	0.76	0.79
Satisfied with explanation of medical tests	0.64#	0.73	0.80*	0.78
Satisfied with attention by provider	0.64#	0.69	0.74	0.83*
Satisfied with admin staff courtesy	0.58#	0.70*	0.72	0.88*
Flu shot past year	0.80#	0.80	0.86*	0.83
Mammogram past year (40+)	–	–	–	–
Mammogram past year (50+)	–	–	–	–
PAP test past year	0.84	0.78	0.84	0.78
Physical exam past year	0.59#	0.54	0.52	0.48
Prenatal care first trimester				

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Table H-1—*Continued*

Measure/Years Into TRICARE	Military Status (Source of Care) AD (All) FY94	FY96	FY97	FY98
Fewer than 3 calls to get appointment	0.59#	0.54	0.55	0.88*
Used ER past year	0.46#	0.28*	0.24	0.30*
Any doctor visit	0.74	0.78	0.78	0.77
Waited less than 30 minutes in provider office	0.72#	0.65	0.72	0.77
	Non-AD (Prime)			
Measure/Years into TRICARE	FY94	FY96	FY97	FY98
Satisfied with appointment scale	0.86	0.85	0.88	0.88
Cholesterol check past year	0.61	0.62	0.65	0.61
Interpersonal concern of providers	0.85#	0.85	0.89*	0.95*
Dental care past year	0.69	0.70	0.75*	0.67*
Satisfied with convenience of treatment location	0.88	0.91	0.93	0.91
Satisfied with time spent with provider	0.88#	0.86	0.91*	0.93
Satisfied with convenience of hours	0.92#	0.96*	0.94	0.99*
Satisfied with access to care if needed	0.91	0.94	0.94	0.96
Satisfied with access to specialist	0.92	0.91	0.89	0.94
Satisfied with access to hospital care	0.96#	0.96	0.97	0.99
Satisfied with access to emergency care	0.92	0.97*	0.95	0.96
Satisfied with ease of making an appointment	0.96	0.95	0.95	0.97
Satisfied with waiting time to see provider	0.88#	0.86	0.90*	0.92
Satisfied with appointment gap	0.88	0.89	0.90	0.92
Satisfied with availability of health care information by phone	0.86	0.83	0.88*	0.88
Satisfied with availability of prescription services	0.95	0.93	0.94	0.94
Satisfied with thoroughness of exam	0.91#	0.90	0.94*	0.95
Satisfied with ability to diagnose	0.88	0.91	0.93	0.91
Satisfied with skill of provider	0.92#	0.96*	0.94	0.99*
Satisfied with thoroughness of treatment	0.94	0.90*	0.94*	0.96
Satisfied with outcome of health care	0.92	0.91	0.93	0.95
Satisfied with overall quality of care	0.93#	0.93	0.96	0.97
Satisfied with explanation of procedures	0.94	0.91	0.93	0.96
Satisfied with explanation of medical tests	0.92	0.91	0.93	0.94
Satisfied with attention by provider	0.91	0.89	0.92	0.94
Satisfied with admin staff courtesy	0.95	0.95	0.96	0.98
Flu shot past year	0.42#	0.51*	0.64*	0.61
Mammogram past year (40+)	0.68	0.64	0.69	0.69
Mammogram past year (50+)	0.69	0.68	0.73	0.72
PAP test past year	0.76#	0.59*	0.62	0.60
Physical exam past year	0.70	0.68	0.69	0.63
Prenatal care first trimester	–	–	–	–
Fewer than 3 calls to get appointment	0.82#	0.77	0.71*	0.96*
Used ER past year	0.34#	0.16*	0.18	0.20
Any doctor visit	0.93#	0.96*	0.80*	0.83
Waited less than 30 minutes in provider office	0.93#	0.92	0.87*	0.92*

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Table H-1—*Continued*

Measure/Years Into TRICARE	Military Status (Source of Care)			
	Non-AD (Civilian)			
	FY94	FY96	FY97	FY98
Satisfied with appointment scale	0.44#	0.56*	0.65*	0.70
Cholesterol check past year	0.36#	0.45*	0.47	0.47
Interpersonal concern of providers	0.63#	0.65	0.74*	0.89*
Dental care past year	0.52#	0.62*	0.62	0.63
Satisfied with convenience of treatment location	0.80#	0.82	0.88*	0.87
Satisfied with time spent with provider	0.71#	0.70	0.79*	0.88*
Satisfied with convenience of hours	0.80#	0.83	0.86	0.90*
Satisfied with access to care if needed	0.68#	0.74	0.77	0.82*
Satisfied with access to specialist	0.58#	0.63	0.68	0.75*
Satisfied with access to hospital care	0.83#	0.85	0.89	0.89
Satisfied with access to emergency care	0.81	0.87	0.87	0.85
Satisfied with ease of making an appointment	0.54#	0.69*	0.74	0.81*
Satisfied with waiting time to see provider	0.60#	0.66	0.73*	0.77
Satisfied with appointment gap	0.64#	0.66	0.74*	0.76
Satisfied with availability of health care information by phone	0.52#	0.65*	0.73*	0.78
Satisfied with availability of prescription services	0.81#	0.79	0.84	0.86
Satisfied with thoroughness of exam	0.78#	0.79	0.85*	0.88
Satisfied with ability to diagnose	0.77#	0.75	0.83*	0.85
Satisfied with skill of provider	0.83#	0.84	0.89*	0.91
Satisfied with thoroughness of treatment	0.81#	0.77	0.84*	0.88
Satisfied with outcome of health care	0.80#	0.78	0.83	0.89*
Satisfied with overall quality of care	0.80#	0.81	0.86	0.91*
Satisfied with explanation of procedures	0.81#	0.79	0.86*	0.89
Satisfied with explanation of medical tests	0.81#	0.75	0.84*	0.90*
Satisfied with attention by provider	0.78#	0.76	0.83*	0.90*
Satisfied with admin staff courtesy	0.68#	0.81*	0.80	0.93*
Flu shot past year	0.33#	0.35	0.45*	0.42
Mammogram past year (40+)	0.58	0.53	0.62	0.61
Mammogram past year (50+)	0.73	0.68	0.74	0.64
Number of nights in hospital past year	0.39	1.01*	0.58	0.60
Number of outpatient visits past year	3.54#	7.93*	8.54	7.70
PAP test past year	0.74	0.68	0.68	0.67
Physical exam past year	0.47	0.56*	0.60	0.53*
Prenatal care first trimester	0.96	0.79	0.95*	0.83*
Fewer than 3 calls to get appointment	0.50#	0.54	0.54	0.89*
Used ER past year	0.53#	0.36*	0.29*	0.36*
Any doctor visit	0.90	0.97*	0.88*	0.94*
Waited less than 30 minutes in provider office	0.75#	0.78	0.80	0.86*

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Table H-1—*Continued*

Measure/Years Into TRICARE	Military Status (Source of Care)			
	Non-AD (Other Nonenrolled)			
	FY94	FY96	FY97	FY98
Satisfied with appointment scale	0.35#	0.43*	0.55*	0.52
Cholesterol check past year	0.50	0.48	0.57*	0.50
Interpersonal concern of providers	0.58#	0.61	0.69*	0.82*
Dental care past year	0.44#	0.59*	0.66*	0.61
Satisfied with convenience of treatment location	0.76	0.80	0.85*	0.79
Satisfied with time spent with provider	0.66#	0.71	0.75	0.76
Satisfied with convenience of hours	0.78	0.83	0.85	0.82
Satisfied with access to care if needed	0.56	0.59	0.63	0.59
Satisfied with access to specialist	0.51	0.53	0.58	0.61
Satisfied with access to hospital care	0.68	0.69	0.73	0.68
Satisfied with access to emergency care	0.74	0.78	0.75	0.73
Satisfied with ease of making an appointment	0.38#	0.55*	0.65*	0.56
Satisfied with waiting time to see provider	0.54#	0.62*	0.67	0.66
Satisfied with appointment gap	0.51#	0.59*	0.64	0.60
Satisfied with availability of health care information by phone	0.41#	0.47	0.68*	0.53*
Satisfied with availability of prescription services	0.75	0.78	0.82	0.81
Satisfied with thoroughness of exam	0.73#	0.74	0.77	0.82
Satisfied with ability to diagnose	0.69#	0.74	0.80	0.80
Satisfied with skill of provider	0.77#	0.83	0.87	0.84
Satisfied with thoroughness of treatment	0.74	0.77	0.81	0.81
Satisfied with outcome of health care	0.74	0.77	0.80	0.75
Satisfied with overall quality of care	0.75	0.78	0.85*	0.78
Satisfied with explanation of procedures	0.74	0.79	0.82	0.73*
Satisfied with explanation of medical tests	0.75	0.79	0.81	0.75
Satisfied with attention by provider	0.71#	0.75	0.79	0.86
Satisfied with admin staff courtesy	0.71#	0.77	0.81	0.93*
Flu shot past year	0.43	0.44	0.56*	0.49
Mammogram past year (40+)	0.69	0.66	0.68	0.54
Mammogram past year (50+)	0.79	0.71	0.71	0.66
PAP test past year	0.71	0.73	0.69	0.61
Physical exam past year	0.54	0.62*	0.67	0.55*
Prenatal care first trimester	–	–	–	–
Fewer than 3 calls to get appointment	0.51#	0.50	0.53	0.77*
Used ER past year	0.53#	0.35*	0.30	0.34
Any doctor visit	0.84	0.90*	0.75*	0.96*
Waited less than 30 minutes in provider office	0.70#	0.72	0.74	0.80

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Table H-1—*Continued*

Measure/Years Into TRICARE	Military Status (Source of Care)			
	Total (All)			
	FY94	FY96	FY97	FY98
Satisfied with appointment scale	0.56#	0.62*	0.69*	0.73*
Cholesterol check past year	0.47	0.48	0.52	0.48
Interpersonal concern of providers	0.67#	0.70	0.77*	0.89*
Dental care past year	0.62#	0.68*	0.71*	0.68
Satisfied with convenience of treatment location	0.83#	0.86	0.89*	0.88
Satisfied with time spent with provider	0.75#	0.76	0.82*	0.87*
Satisfied with convenience of hours	0.81#	0.85*	0.86	0.90*
Satisfied with access to care if needed	0.73#	0.77	0.80	0.83
Satisfied with access to specialist	0.67#	0.69	0.72	0.78*
Satisfied with access to hospital care	0.82#	0.86*	0.89	0.89
Satisfied with access to emergency care	0.83	0.89*	0.88	0.87
Satisfied with ease of making an appointment	0.66#	0.74*	0.79*	0.82*
Satisfied with waiting time to see provider	0.66#	0.70*	0.76*	0.80*
Satisfied with appointment gap	0.69#	0.73	0.76	0.79*
Satisfied with availability of health care information by phone	0.61#	0.65*	0.75*	0.77*
Satisfied with availability of prescription services	0.84#	0.83	0.87*	0.88
Satisfied with thoroughness of exam	0.79#	0.80	0.86*	0.88
Satisfied with ability to diagnose	0.77#	0.79	0.85*	0.85
Satisfied with skill of provider	0.83#	0.85	0.89*	0.91*
Satisfied with thoroughness of treatment	0.81#	0.80	0.86*	0.88
Satisfied with outcome of health care	0.80#	0.81	0.85*	0.88*
Satisfied with overall quality of care	0.81#	0.82	0.88*	0.90*
Satisfied with explanation of procedures	0.82#	0.83*	0.87	0.88*
Satisfied with explanation of medical tests	0.81#	0.82	0.86*	0.87*
Satisfied with attention by provider	0.79#	0.80	0.85*	0.90*
Satisfied with admin staff courtesy	0.77#	0.84*	0.85	0.94*
Flu shot past year	0.44#	0.50	0.60*	0.57
Mammogram past year (40+)	0.63	0.59	0.62	0.62
Mammogram past year (50+)	0.68	0.66	0.67	0.65
PAP test past year	0.71#	0.63*	0.63	0.62
Physical exam past year	0.56	0.58*	0.60	0.53*
Prenatal care first trimester	0.92	0.73	0.92*	0.86*
Satisfied with health care technical aspects (scale)	0.70#	0.71	0.79*	0.81*
Fewer than 3 calls to get appointment	0.66#	0.63	0.61	0.91*
Used ER past year	0.45#	0.25*	0.23*	0.29*
Any doctor visit	0.87#	0.91*	0.81*	0.87*
Waited less than 30 minutes in provider office	0.80#	0.80	0.81*	0.86*

APPENDIX I. TRENDS IN ACCESS AND QUALITY OF CARE UNDER TRICARE

Trends in measures of access to and quality of care are shown in table I-1 for the beneficiary population broken down by military status and source of care. Significant linear trends are indicated by an # if shown next to the "base" values. Entries marked with an asterisk (*) indicate a statistically significant change from the previous year's values. Most measures exhibited a significant linear trend, i.e., increasing satisfaction over time.

Table I-1. Four-Year Trends in Access and Quality of Care

	Military Status (Source of Care)			
	AD (All)			
Measure/Years Into TRICARE	Base	+1	+2	+3
BP check past year	0.79#	0.91*	0.90	0.92
Cholesterol check past year	0.42#	0.40	0.37*	0.39
Interpersonal concern of providers	0.49#	0.68*	0.78*	0.81
Satisfied with convenience of treatment location	0.82#	0.85*	0.86	0.88
Satisfied with time spent with provider	0.61#	0.72*	0.77*	0.79
Satisfied with convenience of hours	0.62#	0.70*	0.75*	0.79
Satisfied with access to care if needed	0.59#	0.66*	0.69*	0.74*
Satisfied with access to specialist	0.41#	0.51*	0.58*	0.62
Satisfied with access to hospital care	0.68#	0.75*	0.79*	0.81
Satisfied with access to emergency care	0.69#	0.70	0.73	0.82*
Satisfied with ease of making an appointment	0.47#	0.60*	0.62	0.70*
Satisfied with waiting time to see provider	0.43#	0.58*	0.61*	0.68*
Satisfied with overall quality of care	0.65#	0.73*	0.76*	0.81*
Any doctor visit	0.68	0.77*	0.72*	0.76
	Non-AD (Prime)			
Measure/Years Into TRICARE	Base	+1	+2	+3
BP check past year	0.77#	0.91*	0.92	0.92
Cholesterol check past year	0.39#	0.48*	0.50	0.46*
Interpersonal concern of providers	0.59#	0.77*	0.84*	0.89*
Satisfied with convenience of treatment location	0.80#	0.85*	0.87	0.88
Satisfied with time spent with provider	0.67#	0.78*	0.82*	0.88*
Satisfied with convenience of hours	0.76#	0.84*	0.86*	0.90*
Satisfied with access to care if needed	0.62#	0.77*	0.78	0.83*
Satisfied with access to specialist	0.52#	0.68*	0.72*	0.75
Satisfied with access to hospital care	0.75#	0.84*	0.85	0.89*
Satisfied with access to emergency care	0.72#	0.78*	0.80	0.85*
Satisfied with ease of making an appointment	0.54#	0.74*	0.77*	0.82*
Satisfied with waiting time to see provider	0.56#	0.70*	0.73*	0.77*
Satisfied with overall quality of care	0.75#	0.84*	0.87*	0.91*
Any doctor visit	0.92	0.89*	0.91*	0.94*

Continued on next page

Table I-1—*Continued*

Measure/Years Into TRICARE	Base	+1	+2	+3
	Military Status (Source of Care)			
	Non-AD (Civilian)			
BP check past year	0.89#	0.95*	0.96	0.94
Cholesterol check past year	0.65	0.68*	0.67	0.61
Interpersonal concern of providers	0.85#	0.91*	0.95*	0.95
Satisfied with convenience of treatment location	0.90	0.92*	0.94	0.92
Satisfied with time spent with provider	0.87#	0.89*	0.91	0.93
Satisfied with convenience of hours	0.93#	0.96*	0.96	0.99*
Satisfied with access to care if needed	0.91#	0.93*	0.94	0.96
Satisfied with access to specialist	0.89#	0.92*	0.91	0.94
Satisfied with access to hospital care	0.94#	0.96*	0.95	0.99*
Satisfied with access to emergency care	0.91#	0.95*	0.94	0.96
Satisfied with ease of making an appointment	0.94#	0.95	0.96*	0.97
Satisfied with waiting time to see provider	0.83#	0.84	0.87*	0.92*
Satisfied with overall quality of care	0.93#	0.96*	0.96	0.97
Any doctor visit	0.94#	0.84*	0.82	0.83
	Non-AD (Other Nonenrolled)			
BP check past year	0.88#	0.95*	0.97*	0.95
Cholesterol check past year	0.55	0.60*	0.60	0.52
Interpersonal concern of providers	0.58#	0.72*	0.80*	0.83
Satisfied with convenience of treatment location	0.71#	0.78*	0.79	0.78
Satisfied with time spent with provider	0.65#	0.76*	0.77	0.77
Satisfied with convenience of hours	0.74#	0.84*	0.83	0.81
Satisfied with access to care if needed	0.56#	0.59*	0.64	0.61
Satisfied with access to specialist	0.44#	0.53*	0.57	0.62
Satisfied with access to hospital care	0.66#	0.68	0.75*	0.69
Satisfied with access to emergency care	0.66#	0.70	0.72	0.75
Satisfied with ease of making an appointment	0.45#	0.57*	0.64*	0.57
Satisfied with waiting time to see provider	0.53#	0.64*	0.67	0.67
Satisfied with overall quality of care	0.73#	0.80*	0.81	0.78
Any doctor visit	0.86#	0.89*	0.93*	0.95
	All			
BP check past year	0.80#	0.91*	0.91	0.90
Cholesterol check past year	0.49	0.53*	0.52	0.48*
Interpersonal concern of providers	0.66#	0.80*	0.87*	0.89*
Satisfied with convenience of treatment location	0.82#	0.87*	0.88	0.88
Satisfied with time spent with provider	0.73#	0.81*	0.84*	0.87*
Satisfied with convenience of hours	0.79#	0.85*	0.87*	0.90*
Satisfied with access to care if needed	0.70#	0.78*	0.80*	0.83*
Satisfied with access to specialist	0.62#	0.72*	0.75*	0.78
Satisfied with access to hospital care	0.79#	0.84*	0.86*	0.89*
Satisfied with access to emergency care	0.78#	0.82*	0.83	0.87*
Satisfied with ease of making an appointment	0.65#	0.76*	0.79*	0.82*
Satisfied with waiting time to see provider	0.62#	0.71*	0.75*	0.80*
Satisfied with overall quality of care	0.79#	0.85*	0.88*	0.90*
Any doctor visit	0.86#	0.84*	0.84*	0.86

APPENDIX J: SAMPLE SELECTION PROCEDURES

The evaluation of TRICARE costs was conducted using independent random samples of MHS-eligible beneficiaries selected from FY1994 and FY 1998 DEERS records, consisting of all beneficiaries who were eligible at any time during those years. This appendix describes how the sample sizes were determined and how the samples were drawn.

The Individual Beneficiary Sample

The sample sizes in both years were based on estimating both CHAMPUS and MTF inpatient costs with a given level of precision. Those costs were chosen because they represent a sizable portion of total MHS costs and because inpatient stays are relatively rare events with large variations in cost that require large sample sizes to estimate accurately. Further, estimates of both MTF and CHAMPUS costs are necessary so that adequate samples are drawn from both catchment and noncatchment areas (i.e., most costs in catchment areas are generated from MTF stays and most costs in noncatchment areas are generated from CHAMPUS stays).

To estimate the appropriate sample size, the following quantities must be specified:

d = the desired precision of the estimate, i.e., average cost (RWPs),

a = the probability that the actual error is larger than d,

$t_{a/2}$ = the abscissa of the unit normal curve that cuts off an area $a/2$ in each tail,

S = the standard deviation of the cost (or RWP) of an inpatient stay,

N_D = the total number of discharges, and

p = the average number of discharges per beneficiary (total discharges/total population).

The estimated sample size is then determined as[1]

$$n = \frac{\left(\frac{t_{a/2}S}{d}\right)^2 \Big/ \left(1+\left(\frac{t_{a/2}S}{d}\right)^2 \Big/ N_D\right)}{p}.$$

For each region, a = 0.05 for MTF RWPs, and a = 0.10 for CHAMPUS costs ($t_{a/2}$ = 1.96 and 1.64, respectively). The percentage error was set to 10 percent for MTF RWPs and to 15 percent for CHAMPUS costs, and d was set to the percentage error multiplied by the average RWP (cost). Acceptable error levels were set higher for CHAMPUS costs because of greater variability in the CHAMPUS data and the desire to keep the required sample sizes at a manageable level. The quantities p, S, and N_D were determined from the entire population of SIDRs, CHAMPUS claims, and DEERS data; their values and the corresponding sample sizes for each region are shown in Tables A-1 to A-4.

[1] The numerator of this expression is obtained from William G. Cochran, *Sampling Techniques*, New York: John Wiley and Sons, Third Ed., 1977, p. 78, eq. 4.3. The discharge rate p appears in the denominator because beneficiaries rather than discharges were sampled.

Table J-1. Determinants of FY 1994 Sample Size for Estimating MTF Inpatient RWPs

Region	Discharges (N_D)	Standard Deviation (S)	Discharge Rate (p)	Precision Level (d)	Sample Size (n)
Southeast	66,158	1.594	0.071	0.085	18,886
Gulf South	37,399	1.426	0.070	0.091	13,171
Southwest	88,017	1.726	0.102	0.095	12,227
S. California	43,681	1.325	0.071	0.086	12,565
N. California	25,371	1.480	0.081	0.095	11,214
Northwest	30,024	1.417	0.091	0.090	10,067
Hawaii	18,701	1.743	0.130	0.085	11,332

Table J-2. Determinants of FY 1994 Sample Size for Estimating CHAMPUS Inpatient Costs

Region	Discharges (N_D)	Standard Deviation (S)	Discharge Rate (p)	Precision Level (d)	Sample Size (n)
Southeast	34,080	$14,985	0.055	$864	14,450
Gulf South	20,142	16,623	0.054	809	19,877
Southwest	25,260	14,370	0.043	913	15,220
S. California	17,052	17,314	0.046	980	17,620
N. California	8,632	18,220	0.044	1,077	16,288
Northwest	6,982	13,681	0.031	760	24,871
Hawaii	2,094	13,988	0.025	3,056	2,211

Table J-3. Determinants of FY 1998 Sample Size for Estimating MTF Inpatient RWPs

Region	Discharges (N_D)	Standard Deviation (S)	Discharge Rate (p)	Precision Level (d)	Sample Size (n)
Southeast	32,810	1.120	0.033	0.087	18,600
Gulf South	21,160	1.114	0.038	0.090	15,059
Southwest	55,317	1.375	0.063	0.097	12,152
S. California	32,044	1.276	0.055	0.090	13,891
N. California	10,381	1.475	0.038	0.099	20,753
Northwest	20,159	1.189	0.059	0.093	10,471
Hawaii	13,045	1.375	0.089	0.084	10,844

Table J-4. Determinants of FY 1998 Sample Size for Estimating CHAMPUS Inpatient Costs

Region	Discharges (N_D)	Standard Deviation (S)	Discharge Rate (p)	Precision Level (d)	Sample Size (n)
Southeast	34,325	$12,055	0.053	$610	19,431
Gulf South	22,395	10,784	0.059	551	16,872
Southwest	25,059	11,393	0.043	737	14,759
S. California	12,981	17,763	0.037	824	31,391
N. California	7,887	14,611	0.046	936	13,131
Northwest	5,726	8,056	0.025	713	12,992
Hawaii	813	27,534	0.009	4,081	11,649

Although the estimates of average MTF RWPs and CHAMPUS inpatient costs are needed only at the region level, gains in precision may be possible by stratifying the population into roughly homogeneous subpopulations. To improve the precision of the regional estimates, the population within each region was further stratified by catchment/noncatchment area (determined by the duty location for active-duty members and the residence address for all other beneficiaries) and beneficiary group.

The catchment/noncatchment areas were defined using the FY1994 definitions for both sample years. Thus, for example, a ZIP code that was in a state noncatchment area in FY 1998 but in a former catchment area in FY1994 was assigned to the former catchment area. This was done to control for the effect of BRAC and other Service-initiated "rightsizing" measures on utilization and costs. Eight beneficiary groups were used for stratification within each catchment/noncatchment area:

(1) active-duty members,

(2) active-duty family members under age 18,

(3) active-duty family members age 18 and above,

(4) retirees under age 65,

(5) retirees age 65 and above,

(6) retiree family members under age 18,

(7) retiree family members ages 18 to 64, and

(8) retiree family members age 65 and above.

A total of 1,280 strata were created as all possible combinations of catchment area/noncatchment area and beneficiary group.

The optimal allocation (in the sense of minimizing the variance of the regional estimates) of the sample to strata is obtained from the following formula:[2]

$$n_h = n \frac{N_{Dh} S_h}{\sum_{h=1}^{H} N_{Dh} S_h},$$

where N_{Dh} is the number of discharges in stratum h, S_h is the standard deviation of RWPs (cost) in stratum h, and H is the number of strata. Once the sample allocations were made for both MTF RWPs and CHAMPUS inpatient costs, the number to be sampled in each stratum was determined as the maximum of the two allocations. Finally, the samples were drawn from FY 1994 and FY 1998 DEERS records using a systematic sampling scheme where beneficiary records were selected at fixed intervals (the interval lengths varied by strata).

Sample Weights

Sample weights are used to make statistics obtained from a sample (e.g., means, totals, and ratios) approximately unbiased estimates of the corresponding population quantities. The base weights are the inverse of the probabilities of selection. For the

[2] William G. Cochran, *op. cit.*, p. 98, eq. 5.26.

stratified sampling plan described above, the weights are equal to $w_{ih} = N_h/n_h$ for each member i of stratum h, where N_h and n_h are the population size and sample size, respectively, in stratum h. The sample was then poststratified so that the sample weights for beneficiaries who enrolled in Prime with a military PCM, with a civilian PCM, and who did not enroll sum to the number of beneficiaries in those categories in the population for each health service region. To obtain the poststratified weights, the base weights are multiplied by

$$\frac{N_R}{\hat{N}_R} = \frac{N_R}{\sum_i \sum_h w_{ih}},$$

where the base weights are summed over all beneficiaries in stratum h within region R.

The Family Sample and Weights

Whereas the individual beneficiary is the unit of analysis for the evaluation of government costs, the evaluation of out-of-pocket costs considers the cost to beneficiary families. A family is selected if at least one member of the family is selected in the stratified sampling scheme described above. The family weights are determined as the inverse of the probabilities of selection. Because the probability of one or more family members being selected is equal to one minus the probability that no family members are selected, the probabilities of selection are obtained as

$$1 - \prod_{h \in S_i} \frac{\binom{N_h - m_{ih}}{n_h}}{\binom{N_h}{n_h}},$$

where m_{ih} is the number of family members for beneficiary i (from the individual sample) in stratum h, and S_i is the set of strata that include all members of the family.

APPENDIX K: BENEFICIARY ACCESS MEASURES FOR PREDICTING UTILIZATION

To help improve the predictive abilities of the utilization models, several measures of beneficiary access were created for both FY 1994 and FY 1998. These measures were used in a prior analysis of the Uniformed Services Family Health Plan[1] and proved to be significant predictors of utilization. The measures are described below.

Catchment area indicator. Using unit ZIP codes for active-duty members and residence ZIP codes for all other beneficiaries, it was determined whether beneficiaries resided in a catchment or noncatchment area.

Distance to nearest MTF or civilian medical facility. The distance to the nearest MTF or civilian medical facility was calculated using a formula for the distance (in miles) between two points on a sphere. The formula requires the latitude and longitude of the ZIP codes for both the beneficiary and the medical facility.

Beneficiary composition by access region. For the inpatient analyses, a 40-mile radius region around the beneficiary's ZIP code was determined. For every military hospital in this region,[2] another 40-mile radius region was determined, as shown in Figure K-1.

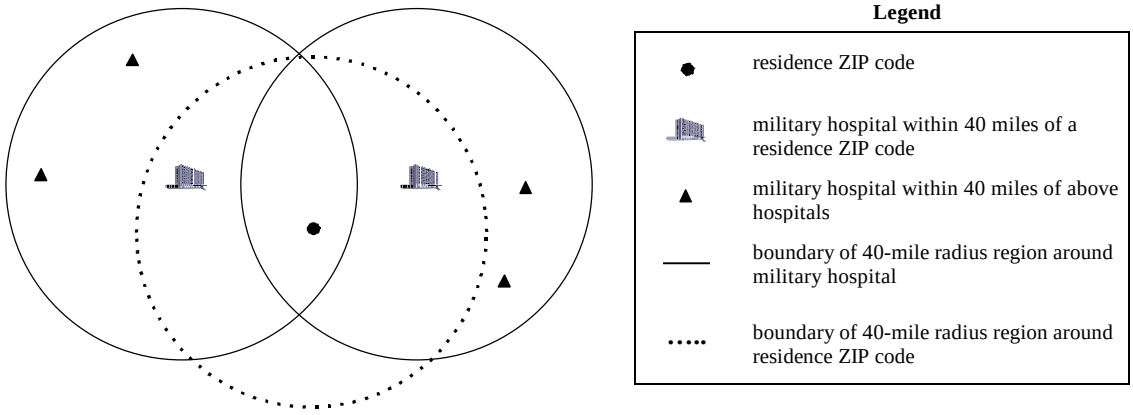

Figure K-1. Construction of MTF Access Regions

The union of the latter 40-mile radius regions (i.e., the union of the catchment areas around the hospitals within 40 miles of the residence ZIP code) will be referred to as an access region (not to be confused with a Health Service Region). If no hospitals were

[1] Philip M. Lurie, Matthew S. Goldberg, and Kathryn L. Wilson, "Summary of IDA's Evaluation of the Uniformed Services Family Health Plan," Institute for Defense Analyses, Document D-1814, January 1996.

[2] Only hospitals for which at least 10 percent of the total population served were non-active-duty beneficiaries were considered.

located within 40 miles of a beneficiary's ZIP code, a 40-mile radius region was determined around the closest military hospital. For the outpatient and prescription analyses, access regions were determined using a 20-mile radius around military hospitals and clinics.

The beneficiary populations (active-duty members, active-duty family members, retirees and family members) in an access region were determined by aggregating the populations across all ZIP codes within the region. Finally, the beneficiary counts over the ZIP codes comprising each region were summed and divided by the total beneficiary count to determine the proportion of each beneficiary type in the region.

Physician full-time equivalents per capita. Physician full-time equivalents (FTEs) are recorded in physician-months by clinical area in MEPRS. The four-digit clinical codes identify both the clinical area and the facility for which physician FTEs were recorded. FTEs were classified into both emergency- and non-emergency-related outpatient care and summed across all military hospitals and clinics within an access region. They were then divided by the total beneficiary population in the region (in thousands) to determine FTEs per capita.

Military hospital beds per capita. The numbers of operating beds at military hospitals are recorded in the Facilities Analysis and Planning Module of the Defense Medical Information System. The DoD defines operating beds as beds currently set up and ready for the care of a patient, including supporting space, equipment, and staff to operate under normal circumstances. The numbers of operating beds were summed across all military hospitals within an access region and divided by the total beneficiary population in the region (in thousands) to determine operating beds per capita.

Civilian hospital beds per capita. The numbers of operating beds at civilian hospitals were obtained from the American Hospital Association (AHA), and data on civilian population counts by ZIP code were obtained from the Bureau of the Census. The number of beds per capita was computed in a manner similar to that for military hospitals except that the access regions and beneficiary populations were defined differently. Each ZIP code was first mapped into a Metropolitan Statistical Area (MSA) as defined by the Office of Management and Budget. ZIP codes that did not fall within an MSA were categorized into non-MSA regions by state. Then the numbers of operating beds were summed across all civilian hospitals within the MSA containing the beneficiary's ZIP code and divided by the total civilian population in the MSA (in thousands) to determine operating beds per capita.

Civilian providers per capita. Data on individual civilian providers and location ZIP codes were obtained from the Provider Record Data file maintained by TMA–Aurora. The ZIP codes were mapped into MSAs, and the total number of providers in an MSA were counted and divided by the civilian population in the MSA (in thousands) to determine civilian providers per capita.

Hospital emergency rooms per capita. Data on the presence of emergency rooms at civilian hospitals were obtained from the AHA. The number of hospitals within an MSA having an emergency room was divided by the civilian population in the MSA (in thousands) to determine hospital emergency rooms per capita.

HMO penetration rates. Data on HMO enrollment and population trends by MSA were obtained from the InterStudy *HMO Trend Report*,[3] supplemented by the InterStudy *Competitive Edge Report*.[4] The HMO penetration rates were then obtained as the number of enrollments divided by the population size.

Unemployment rates. Data on the labor force and the number of unemployed by county were obtained from the Bureau of Labor Statistics. The unemployment rates were then obtained as the number of unemployed divided by the labor force size.

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[3] The InterStudy *HMO Trend Report*, Bloomington: Decision Resources Incorporated, 1998.

[4] The InterStudy *Competitive Edge 9.2, Part III: Regional Market Analysis*, Bloomington: Decision Resources Incorporated, 1999.

APPENDIX L: REGIONAL ANALYSIS OF UTILIZATION AND GOVERNMENT COSTS

This appendix presents the results obtained from the utilization and cost models at the regional level. The following subsections present the analyses of purchased care outpatient, inpatient, and prescription costs, followed by the analyses of MTF outpatient and inpatient costs. No analysis of MTF prescription costs was performed because most prescription costs in MEPRS are stepped down to the final operating accounts and are already accounted for in the outpatient and inpatient analyses.

Purchased Care Outpatient Utilization and Costs

The effects of TRICARE on purchased care outpatient utilization and costs were estimated separately for Prime enrollees (differentiated by choice of PCM) and nonenrollees. Outpatient utilization was measured as the number of visits per eligible beneficiary. Because utilization is more easily contemplated in terms of annual rates, the visits for beneficiaries with less than a full year of eligibility were scaled up to their annual equivalents.

Table L-1 shows the effect of TRICARE on purchased care outpatient utilization and costs. Note that the columns labeled "FY 1994" do not reflect actual utilization or costs in that year. Rather, outpatient utilization rates were first estimated from a statistical model that includes adjustments for the impact of BRAC and other Service rightsizing initiatives. These estimated utilization rates were then applied to the FY 1998 sample of CHAMPUS-eligible beneficiaries. Thus, the FY1994 baseline reflects changes in the beneficiary size and composition that occurred between FY1994 and FY 1998, as well as increased purchased care utilization resulting from MTF closings.

Outpatient utilization under TRICARE is the same as under the traditional CHAMPUS benefit (2.25 visits per beneficiary). However, most regions experienced a slight increase in outpatient utilization under TRICARE. The major exception is the Southern California region, where utilization dropped by almost a third. The most likely explanation for the drop is the imposition under TRICARE of a cap on the number of mental health visits allowed without preauthorization (an unlimited number of mental health visits used to be allowed; it is now limited to 8). Without more detailed clinical data, however, it is difficult to determine why only the Southern California region is affected.

Overall, enrollees with a military PCM showed a 20-percent decline in utilization. With the exception of POS visits and emergencies, these beneficiaries can visit civilian physicians only if referred by their PCM. Enrollees with a civilian PCM showed a 59-percent increase in utilization, reflecting the fact that these beneficiaries are now receiving virtually all of their outpatient care from civilian physicians.

Table L-1. Effect of TRICARE on Purchased Care Outpatient Utilization and Costs by Reg

Region	Beneficiary Group	Enrollment Status	Annual Visits per Beneficiary		C
			FY 1994	FY 1998	FY 1
Southeast	Active-Duty Family Members	Military PCM	1.78	1.16	$2
		Civilian PCM	2.95	4.87	1
		Nonenrolled	2.21	3.04	2
	Retirees and Family Members	Military PCM	1.88	1.47	1
		Civilian PCM	3.37	5.70	1
		Nonenrolled	2.75	2.89	11
	Overall	Overall	2.46	2.63	20
Gulf South	Active-Duty Family Members	Military PCM	1.68	1.16	1
		Civilian PCM	2.82	4.33	
		Nonenrolled	2.15	2.81	1
	Retirees and Family Members	Military PCM	1.84	1.48	
		Civilian PCM	3.12	4.76	
		Nonenrolled	2.63	2.76	7
	Overall	Overall	2.42	2.62	13
Southwest	Active-Duty Family Members	Military PCM	1.55	1.17	2
		Civilian PCM	2.75	3.92	1
		Nonenrolled	1.92	1.83	1
	Retirees and Family Members	Military PCM	1.59	1.49	1
		Civilian PCM	3.04	5.51	1
		Nonenrolled	2.41	2.32	8
	Overall	Overall	2.14	2.18	16
TRICARE Central	Active-Duty Family Members	Military PCM	1.41	1.39	3
		Civilian PCM	2.31	4.51	
		Nonenrolled	1.81	2.93	1
	Retirees and Family Members	Military PCM	1.52	1.31	1
		Civilian PCM	2.67	4.57	
		Nonenrolled	2.22	2.10	10
	Overall	Overall	1.95	2.08	17

Co

Table L-1—*Continued*

Region	Beneficiary Group	Enrollment Status	Annual Visits per Beneficiary		C
			FY 1994	FY 1998	FY 1
Southern California	Active-Duty Family Members	Military PCM	2.21	1.90	2
		Civilian PCM	3.62	4.57	1
		Nonenrolled	2.75	1.83	2
	Retirees and Family Members	Military PCM	2.31	2.14	
		Civilian PCM	4.32	5.08	1
		Nonenrolled	3.38	1.57	6
	Overall	Overall	3.06	2.21	14
Golden Gate	Active-Duty Family Members	Military PCM	1.50	1.56	
		Civilian PCM	2.55	4.27	
		Nonenrolled	1.83	2.10	
	Retirees and Family Members	Military PCM	1.49	2.33	
		Civilian PCM	2.68	6.39	
		Nonenrolled	2.07	1.37	2
	Overall	Overall	2.06	2.37	4
Northwest	Active-Duty Family Members	Military PCM	0.99	0.99	
		Civilian PCM	1.94	3.45	
		Nonenrolled	1.24	2.07	
	Retirees and Family Members	Military PCM	1.03	0.65	
		Civilian PCM	2.24	3.83	
		Nonenrolled	1.61	1.57	1
	Overall	Overall	1.45	1.66	3
Hawaii	Active-Duty Family Members	Military PCM	2.20	1.18	1
		Civilian PCM	3.47	3.52	
		Nonenrolled	2.37	1.56	
	Retirees and Family Members	Military PCM	2.24	1.22	
		Civilian PCM	3.65	3.49	
		Nonenrolled	3.00	1.78	
	Overall	Overall	2.37	1.38	1

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Table L-1— *Continued*

Region	Beneficiary Group	Enrollment Status	Annual Visits per Beneficiary		C
			FY 1994	FY 1998	FY 1
Overall	Active-Duty Family Members	Military PCM	1.65	1.29	14
		Civilian PCM	2.82	4.29	6
		Nonenrolled	2.09	2.43	10
	Retirees and Family Members	Military PCM	1.69	1.44	5
		Civilian PCM	3.16	5.20	7
		Nonenrolled	2.49	2.27	48
	Overall	Overall	2.25	2.25	92

There were a few regional exceptions to these general patterns. In the Golden Gate and Northwest regions, utilization by active-duty family members with a military PCM stayed constant. However, retirees and family members with a military PCM in the Northwest region followed the general pattern of reduced utilization while those in the Golden Gate region experienced an increase in utilization. In Hawaii, utilization by enrollees with a civilian PCM remained essentially constant.

Table L-1 also shows the effect of TRICARE on purchased care outpatient costs. For this comparison, FY 1994 costs were estimated by applying a unit cost model to the utilization estimates and inflating by the Medicare Economic Index (9.2 percent cumulative inflation over the 4-year period). Outpatient costs declined in all regions except the Northwest and Golden Gate, which experienced substantial increases.

The cost per visit increased by 21 percent for Prime enrollees with a military PCM and by 9 percent for enrollees with a civilian PCM; however, the cost per visit declined by 27 percent for nonenrollees. The decline for nonenrolled beneficiaries occurred presumably because they are enjoying provider discounts by using the Extra network, and because they are no longer using the emergency room for non-emergency acute care.

There were a few notable differences among regions. For Prime enrollees with a military PCM, the cost per visit increased by 53 percent in the Gulf South and by 45 percent in the Northwest region. By contrast, the cost per visit remained the same in Southern California. For Prime enrollees with a civilian PCM, the cost per visit decreased by 3 percent in Southern California and increased by 70 percent in Hawaii.

Purchased Care Inpatient Utilization and Costs

In theory, managed care programs apply UM initiatives (such as prospective review by physicians) to reduce the incidence of unneeded hospitalizations, and they apply quality management to reduce the length of stay without compromising the health of the patient. Therefore, much of savings expected from TRICARE should come from containing the costs of expensive inpatient care. Additional savings may be generated not only by reductions in bed days, but also by discounts negotiated between the MCS contractor and the civilian network hospitals and physicians.

Purchased care inpatient utilization was measured as the number of hospital discharges per 1,000 eligible beneficiaries. Again, the discharges for beneficiaries with less than a full year of eligibility were scaled up to their annual equivalents. All of the utilization and cost estimates shown in Table L-2 were computed relative to the FY 1998 sample of CHAMPUS-eligible beneficiaries.

Inpatient utilization under TRICARE is 7 percent higher than under the traditional CHAMPUS benefit (39.4 discharges per 1,000 beneficiaries in FY1998 versus 36.9 discharges in FY 1994). Inpatient utilization patterns vary quite sharply across regions. For example, inpatient utilization in Southern California decreased by 20 percent, whereas it increased by 36 percent in the Golden Gate region.

Table L-2. Effect of TRICARE on Purchased Care Inpatient Utilization and Costs by Reg

Region	Beneficiary Group	Enrollment Status	Annual Discharges per 1000 Beneficiaries		C
			FY 1994	FY 1998	FY 1
Southeast	Active-Duty Family Members	Military PCM	46.33	37.12	$4
		Civilian PCM	74.27	72.80	$1
		Nonenrolled	55.60	85.56	$3
	Retirees and Family Members	Military PCM	25.27	23.97	$1
		Civilian PCM	43.87	50.20	$
		Nonenrolled	34.90	37.22	$8
	Overall	Overall	40.53	43.87	$19
Gulf South	Active-Duty Family Members	Military PCM	60.29	27.70	$2
		Civilian PCM	85.23	69.16	$1
		Nonenrolled	74.40	90.20	$2
	Retirees and Family Members	Military PCM	30.67	36.37	$
		Civilian PCM	48.35	55.10	$
		Nonenrolled	40.60	39.79	$5
	Overall	Overall	49.57	45.83	$12
Southwest	Active-Duty Family Members	Military PCM	38.49	36.10	$3
		Civilian PCM	63.38	96.65	$1
		Nonenrolled	48.06	65.68	$1
	Retirees and Family Members	Military PCM	21.37	25.71	$
		Civilian PCM	38.83	70.85	$
		Nonenrolled	30.34	35.76	$4
	Overall	Overall	35.48	42.96	$12
TRICARE Central	Active-Duty Family Members	Military PCM	37.25	46.27	4
		Civilian PCM	53.35	95.79	
		Nonenrolled	46.77	75.10	2
	Retirees and Family Members	Military PCM	21.44	33.96	1
		Civilian PCM	34.40	70.61	
		Nonenrolled	29.54	30.11	7
	Overall	Overall	32.89	41.39	16

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Table L-2— *Continued*

Region	Beneficiary Group	Enrollment Status	Annual Discharges per 1000 Beneficiaries FY 1994	FY 1998	C FY 1
Southern California	Active-Duty Family Members	Military PCM	47.62	32.41	$3
		Civilian PCM	73.52	81.85	$2
		Nonenrolled	51.01	43.82	$3
	Retirees and Family Members	Military PCM	23.47	29.60	$
		Civilian PCM	39.65	55.47	$1
		Nonenrolled	31.35	16.27	$4
	Overall	Overall	41.70	33.46	$15
Golden Gate	Active-Duty Family Members	Military PCM	37.11	50.03	$
		Civilian PCM	55.82	96.88	$
		Nonenrolled	39.13	68.84	$
	Retirees and Family Members	Military PCM	18.12	45.75	$
		Civilian PCM	28.93	63.20	$
		Nonenrolled	22.33	16.35	$1
	Overall	Overall	29.17	39.65	$4
Northwest	Active-Duty Family Members	Military PCM	31.64	23.66	$
		Civilian PCM	52.52	44.27	$
		Nonenrolled	36.72	42.78	$
	Retirees and Family Members	Military PCM	15.16	17.52	$
		Civilian PCM	31.46	30.93	$
		Nonenrolled	22.26	20.38	$1
	Overall	Overall	27.64	25.29	$3
Hawaii	Active-Duty Family Members	Military PCM	15.19	2.69	$
		Civilian PCM	25.05	26.44	$
		Nonenrolled	16.44	20.93	$
	Retirees and Family Members	Military PCM	13.25	3.55	$
		Civilian PCM	15.72	15.07	$
		Nonenrolled	14.77	7.11	$
	Overall	Overall	15.75	5.99	$1

Co

Table L-2— *Continued*

Region	Beneficiary Group	Enrollment Status	Annual Discharges per 1000 Beneficiaries		C
			FY 1994	FY 1998	FY 1
Overall	Active-Duty Family Members	Military PCM	40.36	33.53	$19
		Civilian PCM	65.04	79.71	$7
		Nonenrolled	50.73	68.00	$15
	Retirees and Family Members	Military PCM	22.77	28.00	$3
		Civilian PCM	37.09	58.34	$4
		Nonenrolled	31.57	31.13	$33
	Overall	Overall	36.85	39.37	$84

Overall, enrollees with a military PCM showed a 17-percent decline in utilization but enrollees with a civilian PCM showed a 23-percent increase. The increase for enrollees with a civilian PCM may reflect the fact that they are now receiving virtually all of their inpatient care at civilian network hospitals.

There were a few regional exceptions to these general patterns. In the TRICARE Central and Golden Gate regions, utilization increased for enrollees with a military PCM, particularly for retirees and family members. In the Gulf South and Northwest, inpatient utilization by active-duty family members with a civilian PCM decreased substantially (between 15 and 20 percent).

In addition to the hospitalization rate, the mean and standard deviation of the length of stay were considered as measures of inpatient utilization. TableL-3 reveals that the lengths of stay of purchased-care hospitalizations decreased in every TRICARE region and by 11 percent overall. The standard deviations remained essentially unchanged.

Table L-3. Effect of TRICARE on Purchased Care Lengths of Stay

	Mean		Standard Deviation	
Region	FY 1994	FY 1998	FY 1994	FY 1998
Southeast	6.6	5.2	12.9	13.0
Gulf South	6.3	5.1	12.9	11.7
Southwest	6.9	5.5	14.4	16.4
TRICARE Central	6.4	5.6	14.3	11.8
Southern California	6.2	5.4	12.4	12.3
Golden Gate	5.4	4.9	12.1	12.1
Northwest	5.1	4.9	9.7	9.3
Hawaii	5.8	5.4	12.6	14.1
Overall	6.3	5.6	13.0	13.2

Table L-2 also shows the effect of TRICARE on purchased care inpatient costs. For this comparison, FY 1994 costs were inflated by the HCFA Hospital Input Price Index (11.3 percent cumulative inflation over the 4-year period). Inpatient costs declined in all regions except for a slight increase in the Northwest and a dramatic increase in the Golden Gate region. The most dramatic decrease occurred in Southern California, where costs were cut by over 40 percent.

Although enrollees with a civilian PCM had a 41-percent higher hospitalization rate under TRICARE, their total costs increased by 47 percent. However, the cost for active-duty family members declined but was offset by a large increase in cost for retirees and family members. Enrollees with a military PCM showed a slight increase in cost despite a moderate drop in utilization, so that the cost per discharge increased somewhat. Although the government benefits from provider discounts, they are offset by the fact that the latter enrollees are hospitalized in civilian facilities only if the required procedures cannot be performed in the MTF. These procedures tend to be more complex and costly than the typical procedures performed in civilian hospitals.

There were a few notable differences among regions. For Prime enrollees with a military PCM, the cost per discharge increase by a third in the Golden Gate Region and nearly tripled (a 192-percent increase) in Hawaii. Again, the increases were much greater

for retirees and family members. By contrast, the cost per discharge declined by 11 percent in TRICARE Central and by 14 percent in Southern California. For Prime enrollees with a civilian PCM, the cost per discharge increased by 36 percent in the Northwest, but decreased by 32 percent in Hawaii.

Purchased Care Prescription Utilization and Costs

Table L-4 shows the effect of TRICARE on prescription utilization and costs. The FY 1994 baseline estimates reveal that even before TRICARE began, prospective Prime enrollees with a civilian PCM were heavier users of purchased care prescription services than were prospective enrollees with a military PCM. Moreover, the former group's prescription utilization nearly doubled under Prime, and the latter group's increased by half. One possible explanation for these increases is that MTFs have restricted their formularies under TRICARE, forcing some beneficiaries to fill their prescriptions at civilian pharmacies. Note also that, under Prime, the participating pharmacy files all prescription claims regardless of cost. Under the traditional benefit, if a prescription cost did not meet the deductible, some beneficiaries may not have bothered to file a claim. Consequently, the additional utilization may be associated with low-cost prescriptions.

Overall, prescription utilization more than doubled under TRICARE. A few regions deviated from the general pattern. Prescription utilization decreased by 8 percent in Southern California and by 26 percent in the Golden Gate region. The same pattern is exhibited for enrollees with a military PCM. Prescription utilization increased in every region for enrollees with a civilian PCM, particularly for retirees and family members.

Table L-4 also shows the effects of TRICARE on purchased care prescription costs. FY 1994 costs were inflated by the Consumer Price Index (CPI) for prescription drugs (12.9 percent). Overall, prescription costs increased by 34 percent under TRICARE. This increase, though significant, is much smaller than the overall doubling in prescription utilization, consistent with the earlier conjecture that the additional utilization may be associated with low-cost prescriptions.

MTF Outpatient Utilization and Costs

During FY 1998 there was no widely available, centralized, patient-level accounting system with information on MTF outpatient workload and costs. The Ambulatory Data System had been only partially implemented by the end of FY1998. Information on outpatient workload and costs are captured in MEPRS on an aggregate basis by clinical area only. Therefore, there is no way to separate the costs generated by nonenrollees during space-available visits from the costs generated by Prime enrollees. As a result, it was not possible to determine the effect of Prime enrollment on MTF outpatient costs.

Table L-4. Effect of TRICARE on Purchased Care Prescription Utilization and Costs by Reg

Region	Beneficiary Group	Enrollment Status	Annual Prescriptions per Beneficiary		C
			FY 1994	FY 1998	FY 1
Southeast	Active-Duty Family Members	Military PCM	0.19	0.41	$
		Civilian PCM	0.78	3.03	$
		Nonenrolled	0.39	1.73	$
	Retirees and Family Members	Military PCM	0.29	0.63	$
		Civilian PCM	1.32	5.48	$
		Nonenrolled	0.76	2.62	$2
	Overall	Overall	0.58	2.03	$2
Gulf South	Active-Duty Family Members	Military PCM	0.26	0.48	$
		Civilian PCM	1.04	3.45	$
		Nonenrolled	0.58	1.86	$
	Retirees and Family Members	Military PCM	0.38	1.21	$
		Civilian PCM	1.54	5.84	$
		Nonenrolled	1.02	3.33	$1
	Overall	Overall	0.83	2.72	$2
Southwest	Active-Duty Family Members	Military PCM	0.32	0.50	$
		Civilian PCM	1.45	3.97	$
		Nonenrolled	0.66	1.48	$
	Retirees and Family Members	Military PCM	0.44	0.74	$
		Civilian PCM	2.11	6.92	$
		Nonenrolled	1.27	2.24	$1
	Overall	Overall	0.96	1.96	$2
TRICARE Central	Active-Duty Family Members	Military PCM	0.11	0.29	$
		Civilian PCM	0.43	2.70	$
		Nonenrolled	0.28	1.55	$
	Retirees and Family Members	Military PCM	0.18	0.45	$
		Civilian PCM	0.84	3.78	$
		Nonenrolled	0.53	2.01	$2
	Overall	Overall	0.39	1.51	$2

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Table L-4— *Continued*

Region	Beneficiary Group	Enrollment Status	Annual Prescriptions per Beneficiary FY 1994	Annual Prescriptions per Beneficiary FY 1998	C FY 1
Southern California	Active-Duty Family Members	Military PCM	0.69	0.37	$
		Civilian PCM	2.27	3.37	$
		Nonenrolled	1.30	0.97	$
	Retirees and Family Members	Military PCM	0.96	0.65	$
		Civilian PCM	3.48	6.09	$
		Nonenrolled	2.27	1.58	$1
	Overall	Overall	1.80	1.65	$2
Golden Gate	Active-Duty Family Members	Military PCM	0.86	0.39	$
		Civilian PCM	2.66	3.25	$
		Nonenrolled	1.39	1.24	$
	Retirees and Family Members	Military PCM	1.23	0.88	$
		Civilian PCM	4.69	5.43	$
		Nonenrolled	2.64	1.23	$
	Overall	Overall	2.42	1.79	$1
Northwest	Active-Duty Family Members	Military PCM	0.11	0.21	$
		Civilian PCM	0.61	2.63	$
		Nonenrolled	0.26	0.94	$
	Retirees and Family Members	Military PCM	0.14	0.31	$
		Civilian PCM	0.90	4.62	$
		Nonenrolled	0.48	1.56	$
	Overall	Overall	0.39	1.33	$
Hawaii	Active-Duty Family Members	Military PCM	0.10	0.09	$
		Civilian PCM	0.54	1.48	$
		Nonenrolled	0.17	0.67	$
	Retirees and Family Members	Military PCM	0.26	0.33	$
		Civilian PCM	0.78	3.81	$
		Nonenrolled	0.59	1.09	$
	Overall	Overall	0.28	0.38	$

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Table L-4— *Continued*

Region	Beneficiary Group	Enrollment Status	Annual Prescriptions per Beneficiary		C
			FY 1994	FY 1998	FY 1
Overall	Active-Duty Family Members	Military PCM	0.27	0.35	$
		Civilian PCM	1.29	3.26	$
		Nonenrolled	0.64	1.43	$1
	Retirees and Family Members	Military PCM	0.36	0.64	$
		Civilian PCM	1.97	5.61	$1
		Nonenrolled	1.03	2.24	$10
	Overall	Overall	0.83	1.82	$15

Given the lack of detail in the MEPRS data, FY 1994 baseline costs were estimated by applying the FY 1994 visit rate and the cost per visit to the FY 1998 beneficiary population and adjusting for inflation.[2] The results are shown in Table L-5.

Table L-5. Effect of TRICARE on MTF Outpatient Utilization and Costs by Region

	Annual Visits per Beneficiary		Cost ($millions)	
Region	FY 1994	FY 1998	FY 1994	FY 1998
Southeast	5.45	4.70	$438.08	$450.90
Gulf South	5.88	4.74	289.45	272.07
Southwest	7.69	6.67	465.74	515.55
TRICARE Central	6.57	4.86	507.44	465.95
Southern California	4.78	4.86	263.01	319.60
Golden Gate	3.23	3.51	86.08	103.97
Northwest	6.71	5.84	177.83	175.27
Hawaii	9.29	7.44	127.34	119.79
Overall	6.13	5.20	$2,354.98	$2,423.08

It should be noted that MTF visits cannot be directly compared with purchased care visits because the two are measured differently. An MTF visit does not necessarily involve a face-to-face contact with a physician—it could be just a phone call for medical advice. As another example, if a physical examination is accompanied by a series of laboratory tests, each test station (e.g., pathology, radiology) may claim a "visit" in addition to the outpatient clinic itself.

With this understanding, the number of MTF visits declined in most regions, except for increases of 2 percent in Southern California and 9 percent in the Golden Gate region. TRICARE Central experienced a 26-percent decline in utilization, the largest among all the TRICARE regions. Although outpatient utilization decreased by 15 percent overall, outpatient costs increased by 3 percent.

The average cost per visit increased in every TRICARE region and by 21 percent overall. The Golden Gate region had the smallest increase—11 percent. The largest increases were found in the Southwest (28 percent) and TRICARE Central (24 percent).

MTF Inpatient Utilization and Costs

Under the traditional military health care benefit of direct care and CHAMPUS, there was a priority system for access to the MTF. The group with the highest priority was (and remains) active-duty service members. Next came active-duty family members and, finally, retirees and their family members. Because of this priority system, baseline utilization and cost estimates should vary significantly by beneficiary category. For this

[2] FY 1994 costs were inflated by the HCFA Hospital Input Price Index plus a factor for medical intensity and technology. The 4-year cumulative growth in the HCFA index was 11.3 percent. A 4-year allowance for intensity and technology was added to that factor at a rate of 0.7 percent per year, yielding a total adjustment of 10.4 percent. The source for the intensity and technology factor is Matthew S. Goldberg and Ravi Sharma, "Inflation in DoD Medical Care," Institute for Defense Analyses, Paper P-3325, July 1997.

reason, MTF inpatient utilization and cost were computed at a greater level of detail than their purchased care counterparts. These estimates are shown in Table L-6.

MTF inpatient utilization declined by 18 percent overall. All of the regions showed some decline (except for the Southwest, where utilization remained constant), ranging from 3 percent in Southern California to between 30 and 34 percent in Hawaii, the Northwest, TRICARE Central, and the Northeast.

Utilization declined for every beneficiary group except retirees and their family members with a military PCM, who experienced a 61-percent increase. The increase for retirees and family members was most notable in the Southwest and Golden Gate regions, where utilization more than doubled. This group had the lowest access to MTF care prior to TRICARE, and their access improved once they enrolled in Prime. Among the individual regions, only the Northwest showed a small decrease in MTF inpatient utilization for this group.

By contrast, active-duty family members with a military PCM, who enjoyed an intermediate level of access prior to TRICARE, experienced a 28-percent decrease in utilization. Utilization was lower for this beneficiary group in every TRICARE region. Apparently, the trend toward fewer hospitalizations more than offset the increased access for this group of beneficiaries.

Table L-6 also shows the effect of TRICARE on MTF inpatient costs. For this comparison, MTF inpatient costs in FY 1994 were inflated using the same index that was previously applied to MTF outpatient costs. Inpatient costs declined by 32 percent overall, a greater percentage decline than the hospitalization rate, so that the cost per discharge also declined (17 percent). The only major exceptions are the Gulf South and Hawaii, which experienced increases of 6 percent and 28 percent, respectively.

Table L-6. Effect of TRICARE on MTF Inpatient Utilization and Costs by Region

Region	Beneficiary Group	Enrollment Status	Annual Discharges per 1,000 Beneficiaries FY 1994	FY 1998	FY
Southeast	Active Duty Members	Military PCM	110.98	108.00	
	Active-Duty Family Members	Military PCM	160.23	74.20	
		Civilian PCM	88.01	17.17	
		Nonenrolled	79.94	63.62	
	Retirees and Family Members < 65	Military PCM	82.38	104.61	
		Civilian PCM	38.71	19.98	
		Nonenrolled	32.51	13.65	
	Retirees and Family Members ≥ 65	Ineligible	50.58	21.97	
	Overall	Overall	71.58	47.11	
Gulf South	Active Duty Members	Military PCM	98.27	103.72	
	Active-Duty Family Members	Military PCM	147.23	97.03	
		Civilian PCM	74.57	16.77	
		Nonenrolled	62.59	84.87	
	Retirees and Family Members < 65	Military PCM	80.14	112.63	
		Civilian PCM	41.04	7.52	
		Nonenrolled	29.44	13.70	
	Retirees and Family Members ≥ 65	Ineligible	49.50	30.57	
	Overall	Overall	62.18	48.34	
Southwest	Active Duty Members	Military PCM	146.91	138.24	
	Active-Duty Family Members	Military PCM	213.62	150.69	
		Civilian PCM	115.12	20.10	
		Nonenrolled	117.05	106.25	
	Retirees and Family Members < 65	Military PCM	107.80	268.39	
		Civilian PCM	47.69	33.20	
		Nonenrolled	38.60	47.49	
	Retirees and Family Members ≥ 65	Ineligible	66.54	99.49	
	Overall	Overall	101.67	102.86	

Table L-6—*Continued*

Region	Beneficiary Group	Enrollment Status	Annual Discharges per 1,000 Beneficiaries FY 1994	FY 1998	FY
TRICARE Central	Active Duty Members	Military PCM	107.95	93.77	
	Active-Duty Family Members	Military PCM	167.48	89.63	
		Civilian PCM	98.96	26.07	
		Nonenrolled	75.42	59.70	
	Retirees and Family Members < 65	Military PCM	86.05	117.06	
		Civilian PCM	49.66	40.42	
		Nonenrolled	32.33	12.84	
	Retirees and Family Members ≥ 65	Ineligible	52.54	32.82	
	Overall	Overall	75.06	51.25	
Southern California	Active Duty Members	Military PCM	90.48	94.26	
	Active-Duty Family Members	Military PCM	137.03	123.30	
		Civilian PCM	79.25	45.96	
		Nonenrolled	69.90	90.16	
	Retirees and Family Members < 65	Military PCM	62.78	89.93	
		Civilian PCM	32.83	39.76	
		Nonenrolled	26.68	25.29	
	Retirees and Family Members ≥ 65	Ineligible	43.64	25.73	
	Overall	Overall	65.94	64.32	
Golden Gate	Active Duty Members	Military PCM	81.56	96.88	
	Active-Duty Family Members	Military PCM	132.30	94.23	
		Civilian PCM	77.00	12.75	
		Nonenrolled	60.33	66.90	
	Retirees and Family Members < 65	Military PCM	65.42	134.18	
		Civilian PCM	36.01	19.76	
		Nonenrolled	28.04	20.51	
	Retirees and Family Members ≥ 65	Ineligible	43.87	29.63	
	Overall	Overall	54.68	43.34	

Table L-6—*Continued*

Region	Beneficiary Group	Enrollment Status	Annual Discharges per 1,000 Beneficiaries FY 1994	FY 1998	FY
Northwest	Active Duty Members	Military PCM	130.44	81.95	
	Active-Duty Family Members	Military PCM	207.24	152.22	
		Civilian PCM	102.20	38.07	
		Nonenrolled	104.78	72.38	
	Retirees and Family Members < 65	Military PCM	100.70	93.18	
		Civilian PCM	47.74	27.08	
		Nonenrolled	37.17	17.23	
	Retirees and Family Members ≥ 65	Ineligible	60.91	47.68	
	Overall	Overall	90.63	62.86	
Hawaii	Active Duty Members	Military PCM	158.05	98.43	
	Active-Duty Family Members	Military PCM	240.48	145.25	
		Civilian PCM	130.30	56.91	
		Nonenrolled	162.65	93.40	
	Retirees and Family Members < 65	Military PCM	97.38	101.70	
		Civilian PCM	56.23	42.54	
		Nonenrolled	38.87	39.51	
	Retirees and Family Members ≥ 65	Ineligible	63.61	109.98	
	Overall	Overall	160.05	113.41	
Overall	Active Duty Members	Military PCM	114.09	105.33	
	Active-Duty Family Members	Military PCM	179.55	130.19	
		Civilian PCM	93.09	30.70	
		Nonenrolled	84.85	78.76	
	Retirees and Family Members < 65	Military PCM	87.64	141.12	
		Civilian PCM	42.96	28.18	
		Nonenrolled	32.70	21.62	
	Retirees and Family Members ≥ 65	Ineligible	53.01	42.15	
	Overall	Overall	79.30	64.96	1,8

In addition to the hospitalization rate, the mean and standard deviation of the length of stay were considered as measures of inpatient utilization. TableL-7 reveals that both the mean and standard deviation of MTF lengths of stay decreased in every TRICARE region. The lower standard deviations under TRICARE indicate that TRICARE has been successful in implementing control over the health care delivery process.

Table L-7. Effect of TRICARE on MTF Lengths of Stay by Region

	Mean		Standard Deviation	
Region	FY 1994	FY 1998	FY 1994	FY 1998
Southeast	4.3	3.5	7.7	5.0
Gulf South	4.7	3.7	7.0	4.7
Southwest	4.9	3.8	7.1	4.8
TRICARE Central	4.1	3.3	6.5	4.1
Southern California	3.5	2.7	5.1	3.2
Golden Gate	3.8	3.1	5.3	3.9
Northwest	5.3	4.5	7.7	5.0
Hawaii	4.3	3.5	6.7	4.2
Overall	5.5	4.1	9.9	6.3

Regional Summary

An overall estimate of the regional impact of TRICARE on government costs is obtained by summing all direct and purchased care costs along with administrative and other costs. The cost elements are the same as were used in Table 4-3 in the main text and are reproduced below.

Direct Care

- Inpatient
- Outpatient
- Dental
- Special Programs
- Readiness
- Military Pay Adjustment
- Military Construction
- Contractor Administrative Cost

Purchased Care

- Inpatient
- Outpatient
- Prescriptions
- NMOP
- Capital Construction/DME
- Special and Emergent Care
- Other Pass-Through Costs
- Resource Sharing Adjustment
- Contractor Administrative Cost
- Government Administrative Cost

In addition, system-wide overhead costs (the FYDP program elements shown in Table 4-3) were allocated across TRICARE regions in proportion to their total health care and administrative costs above. The overall impact of TRICARE by region is shown in Figure L-1.

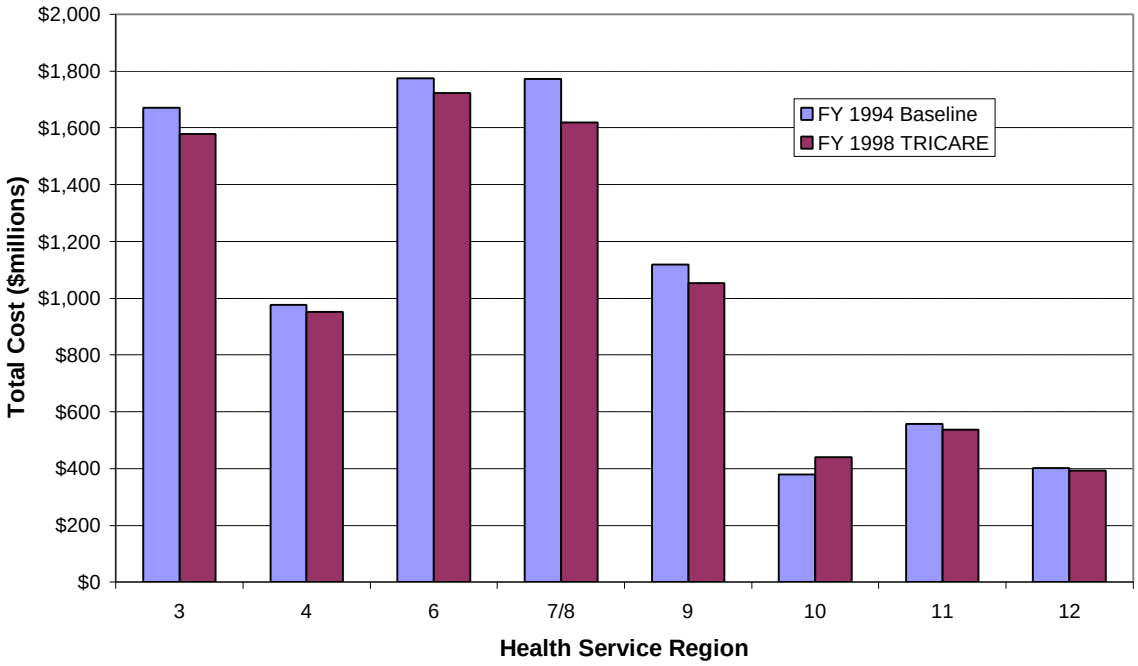

Figure L-1. Regional Impact of TRICARE on Government Costs

Figure L-1 shows that all regions except Golden Gate (Region 10) experienced slight to moderate declines in cost under TRICARE. The Golden Gate region experienced a slight increase in cost, due primarily to an increase in purchased care costs. Purchased care costs in the Golden Gate region comprise the largest share of total costs (40 percent) of any TRICARE region.

APPENDIX M: EFFECT OF TRICARE ON OTHER INSURANCE COVERAGE

On the 1998 Health Care Survey of DoD Beneficiaries, two questions were asked of respondents to ascertain the affect of TRICARE on their private health insurance coverage. Respondents were asked whether they added or dropped private insurance coverage because of TRICARE, or whether TRICARE had no effect on their insurance coverage decision. The first question pertained to TRICARE or Medicare supplemental insurance coverage and the second to other private health insurance or an HMO. Tables M-1 and M-2 show the impact of TRICARE on beneficiaries' insurance coverage decisions. TRICARE Senior enrollees were excluded from the tables because there were too few of them to produce reliable estimates.

Table M-1. TRICARE Effect on Supplemental Insurance Coverage by Region

Region	Beneficiary Group	Enrollment Status	No Effect	Added	Dropped
Southeast	Active Duty Family Members	Military PCM	95.1%	2.4%	2.5%
		Civilian PCM	92.7	3.8	3.5
		Not Enrolled	89.3	9.7	1.0
	Retirees and Family Members < 65	Military PCM	84.9	6.3	8.8
		Civilian PCM	82.3	5.7	11.9
		Not Enrolled	80.7	18.0	1.3
	Retirees and Family Members ≥ 65	Ineligible	95.3	4.5	0.2
Gulf South	Active Duty Family Members	Military PCM	87.6	10.1	2.3
		Civilian PCM	94.2	3.9	1.9
		Not Enrolled	95.1	3.7	1.3
	Retirees and Family Members < 65	Military PCM	84.0	13.6	2.5
		Civilian PCM	83.3	6.5	10.2
		Not Enrolled	81.3	9.0	9.7
	Retirees and Family Members ≥ 65	Ineligible	84.1	14.9	1.0
Southwest	Active Duty Family Members	Military PCM	95.9	4.0	0.1
		Civilian PCM	88.0	9.9	2.1
		Not Enrolled	95.3	2.4	2.3
	Retirees and Family Members < 65	Military PCM	96.6	2.0	1.3
		Civilian PCM	86.6	11.6	1.8
		Not Enrolled	87.5	5.5	7.0
	Retirees and Family Members ≥ 65	Ineligible	85.8	7.5	6.7
TRICARE Central	Active Duty Family Members	Military PCM	87.2	11.4	1.4
		Civilian PCM	95.5	2.6	1.9
		Not Enrolled	90.5	7.0	2.5
	Retirees and Family Members < 65	Military PCM	94.0	4.3	1.7
		Civilian PCM	88.6	9.7	1.7
		Not Enrolled	81.1	14.7	4.2
	Retirees and Family Members ≥ 65	Ineligible	84.8	6.4	8.8

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Table M-1—*Continued*

Region	Beneficiary Group	Enrollment Status	No Effect	Added	Dropped
S. California	Active Duty Family Members	Military PCM	93.9%	3.7%	2.4%
		Civilian PCM	90.3	5.2	4.5
		Not Enrolled	88.5	11.5	0.0
	Retirees and Family Members < 65	Military PCM	86.7	4.3	9.0
		Civilian PCM	89.9	5.5	4.6
		Not Enrolled	90.4	7.3	2.3
	Retirees and Family Members ≥ 65	Ineligible	98.4	1.1	0.5
Golden Gate	Active Duty Family Members	Military PCM	92.6	5.0	2.3
		Civilian PCM	96.8	1.8	1.4
		Not Enrolled	91.4	3.7	4.9
	Retirees and Family Members < 65	Military PCM	83.4	14.7	1.9
		Civilian PCM	87.3	7.6	5.0
		Not Enrolled	86.0	11.1	2.9
	Retirees and Family Members ≥ 65	Ineligible	86.3	12.9	0.8
Northwest	Active Duty Family Members	Military PCM	94.4	5.6	0.0
		Civilian PCM	89.9	8.9	1.2
		Not Enrolled	92.6	3.3	4.1
	Retirees and Family Members < 65	Military PCM	92.9	4.6	2.4
		Civilian PCM	92.1	7.9	0.0
		Not Enrolled	86.8	5.1	8.2
	Retirees and Family Members ≥ 65	Ineligible	78.1	11.4	10.5
Hawaii	Active Duty Family Members	Military PCM	89.1	9.6	1.3
		Civilian PCM	95.6	2.9	1.5
		Not Enrolled	90.5	6.5	3.0
	Retirees and Family Members < 65	Military PCM	94.3	2.3	3.4
		Civilian PCM	93.4	4.0	2.6
		Not Enrolled	93.8	5.7	0.5
	Retirees and Family Members ≥ 65	Ineligible	82.9	7.8	9.3
Overall	Active Duty Family Members	Military PCM	94.5	3.2	2.3
		Civilian PCM	92.8	4.4	2.8
		Not Enrolled	86.5	11.8	1.7
	Retirees and Family Members < 65	Military PCM	85.5	6.1	8.4
		Civilian PCM	84.0	8.4	7.7
		Not Enrolled	85.9	13.0	1.2
	Retirees and Family Members ≥ 65	Ineligible	95.7	3.7	0.6

Table M-2. TRICARE Effect on Private Insurance Coverage by Region

Region	Beneficiary Group	Enrollment Status	No Effect	Added	Dropped
Southeast	Active Duty Family Members	Military PCM	95.4%	2.3%	2.3%
		Civilian PCM	90.6	3.6	5.8
		Not Enrolled	90.1	8.2	1.7
	Retirees and Family Members<65	Military PCM	86.0	5.8	8.2
		Civilian PCM	81.5	4.1	14.5
		Not Enrolled	80.2	17.6	2.1
	Retirees and Family Members≥65	Ineligible	94.1	5.7	0.2
Gulf South	Active Duty Family Members	Military PCM	86.9	10.4	2.7
		Civilian PCM	96.0	1.8	2.1
		Not Enrolled	92.4	4.4	3.2
	Retirees and Family Members<65	Military PCM	87.4	9.6	3.0
		Civilian PCM	87.8	4.2	8.0
		Not Enrolled	87.4	3.7	8.8
	Retirees and Family Members≥65	Ineligible	77.2	21.9	0.9
Southwest	Active Duty Family Members	Military PCM	94.8	5.1	0.1
		Civilian PCM	85.4	12.7	1.9
		Not Enrolled	95.1	1.6	3.4
	Retirees and Family Members<65	Military PCM	92.7	3.2	4.1
		Civilian PCM	89.2	10.1	0.7
		Not Enrolled	88.5	3.5	8.0
	Retirees and Family Members≥65	Ineligible	85.3	5.5	9.2
TRICARE Central	Active Duty Family Members	Military PCM	81.6	16.3	2.0
		Civilian PCM	92.6	5.3	2.1
		Not Enrolled	87.5	9.3	3.2
	Retirees and Family Members<65	Military PCM	94.8	3.0	2.2
		Civilian PCM	92.8	3.7	3.5
		Not Enrolled	89.9	9.5	0.5
	Retirees and Family Members≥65	Ineligible	85.3	6.1	8.6
S. California	Active Duty Family Members	Military PCM	84.1	6.4	9.5
		Civilian PCM	82.2	15.1	2.7
		Not Enrolled	95.0	4.2	0.7
	Retirees and Family Members<65	Military PCM	87.8	9.3	2.9
		Civilian PCM	95.8	2.4	1.9
		Not Enrolled	90.4	2.2	7.4
	Retirees and Family Members≥65	Ineligible	98.1	1.1	0.8
Golden Gate	Active Duty Family Members	Military PCM	86.3	1.1	12.6
		Civilian PCM	94.7	1.2	4.1
		Not Enrolled	90.8	6.3	2.9
	Retirees and Family Members<65	Military PCM	95.9	3.2	0.9
		Civilian PCM	93.4	3.7	3.0
		Not Enrolled	95.4	1.5	3.2
	Retirees and Family Members≥65	Ineligible	92.9	2.6	4.5

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Table M-2—*Continued*

Region	Beneficiary Group	Enrollment Status	No Effect	Added	Dropped
Northwest	Active Duty Family Members	Military PCM	94.7%	1.8%	3.5%
		Civilian PCM	92.0	6.5	1.5
		Not Enrolled	86.0	11.7	2.3
	Retirees and Family Members < 65	Military PCM	88.2	4.6	7.2
		Civilian PCM	77.6	10.3	12.1
		Not Enrolled	85.7	13.4	0.9
	Retirees and Family Members ≥ 65	Ineligible	95.2	3.4	1.4
Hawaii	Active Duty Family Members	Military PCM	89.2	8.1	2.7
		Civilian PCM	91.0	3.7	5.2
		Not Enrolled	92.3	3.9	3.9
	Retirees and Family Members < 65	Military PCM	85.4	6.6	7.9
		Civilian PCM	84.1	10.8	5.1
		Not Enrolled	82.6	10.0	7.4
	Retirees and Family Members ≥ 65	Ineligible	86.5	13.5	0.0
Overall	Active Duty Family Members	Military PCM	95.0	2.3	2.7
		Civilian PCM	91.7	3.5	4.8
		Not Enrolled	90.6	7.9	1.5
	Retirees and Family Members < 65	Military PCM	86.8	4.9	8.3
		Civilian PCM	85.8	5.3	8.9
		Not Enrolled	82.2	15.8	2.0
	Retirees and Family Members ≥ 65	Ineligible	94.3	4.9	0.8

APPENDIX N: SELECTED FYDP PROGRAM ELEMENT DEFINITIONS

Table N-1. Selected FYDP Medical Program Element Definitions

Program Element	Title	Description
0807798HP	Management Headquarters	Includes manpower authorizations, peculiar and support equipment, necessary facilities and the associated costs specifically identified and measurable to the following: Army: U.S. Army Medical Command Headquarters; Medical Material Agency. Navy: Bureau of Medicine and Surgery. Defense Agencies: Defense Medical Facilities Office, which is a component of the Defense Medical Program Activity.
0807791HP	MHS Information Management/ Information Technology (IM/IT)	Includes manpower authorizations, peculiar and support equipment, necessary facilities and the associated costs specifically identified and measurable to the following: This program element contains funding for reliable, responsive standardized information systems support to health care providers, managers, and decision makers at all levels of the DoD through the following MHS IM/IT business areas: Clinical Logistics, Executive Information/Decision Support, resources, Theater, Infrastructure and the TRAC2ES Program. Oversees and maintains DoD Unified Medical Program resources for all medical activities.
0807709HP	TRICARE Management Activity (TMA)	Includes manpower authorizations, peculiar and support equipment, necessary facilities and the associated costs specifically identified and measurable to the following: Resources devoted to the operation of the TMA. This program element contains funding for TMA operating costs supporting delivery of patient care worldwide for members of the Armed Forces, family members, and others entitled to DoD health care. Oversees and maintains DoD Unified Medical Program resources for all medical activities.

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Table N-1—*Continued*

Program Element	Title	Description
0807785HP	Armed Forces Institute of Pathology (AFIP)	Includes manpower authorizations, peculiar and support equipment, necessary facilities and the associated costs specifically identifiable and measurable to the following: Includes operation and maintenance of the AFIP as authorized under DoD Directive 5154.24. Includes expenses incurred in the conduct of the AFIP's assigned missions: serves as chief reviewing authority on the diagnosis of pathologic tissue for the Armed Services; conducts experimental, statistical and morphological research and investigation in the field of pathology; operates the Armed Forces Medical Examiner System; operates the National Museum of Health and Medicine; maintains a Medical Illustration Service; administers the drug testing quality control and proficiency testing programs for the DoD; administers implementation of the DoD Clinical Laboratory Improvement Program; operates the Defense Special Weapons Agency Registry.
0801720HP	Examining Activities – Health Care	Includes manpower authorizations, peculiar and support equipment, necessary facilities and the associated costs specifically identified and measurable to the following: Resources devoted to administering physical examinations and performing evaluations of medical suitability. Also includes resources at the Armed Forces Examination and Entrance Stations (AFEES) devoted to the Defense Medical Review Board. Excludes Service recruiting headquarters, career counselors assigned to AFEES, and mental/vocational testing performed by recruiting personnel.
0806721HP	Uniformed Services University of the Health Sciences (USUHS)	Includes manpower authorizations, peculiar and support equipment, necessary facilities and the associated costs specifically identified and measurable to the following: Resources associated with the establishment, operation, and maintenance of the USUHS. Includes instructors and instructional support.
0806722HP	Armed Forces Health Professions Scholarship Program	Includes costs specifically identified and measurable to the Armed Scholarship Program Forces Health Professions Scholarship, Financial Assistance Program, and other precommissioning professional scholarship programs. Excludes manpower authorizations and administrative support costs for the above programs, other health acquisition programs, and the Airman's Education Commissioning Program.

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Table N-1—*Continued*

Program Element	Title	Description
0807714HP	Other Health Activities	Includes manpower authorizations, peculiar and support equipment, necessary facilities and the associated costs specifically identified and measurable to the following: Organizations and functions that support the provision of health care for MHS beneficiaries to include activities such as management headquarters for regional lead agents, central medical laboratories, medical service squadrons, AMEED Field Procurement Offices, the Health Services Data Systems Agency, Navy Healthcare Support Offices, public affairs, and family advocacy among others. Excludes tactical medical units (including dental activities) other than described above; Armed Forces Institute of Pathology and Aeromedical Evacuation resources; AFEES; recovery, preparation, transportation, and internment of deceased military personnel; veterinary services; and functions which are integral to medical center/station hospital/clinic/dispensary operations. Excludes activities that provide support to the unique health care mission required by virtue of the military mission and not generally analogous to services provided under a civilian health benefit plan.

ABBREVIATIONS

AD	Active Duty
ADFM	Active-Duty Family Members
ADS	Ambulatory Data System
AFEES	Armed Forces Examination and Entrance Stations
AFIP	Armed Forces Institute of Pathology
AHA	American Hospital Association
APO	Army Post Office
BPA	Bid Price Adjustment
BRAC	Base Realignment and Closure
CHAMPUS	Civilian Health and Medical Program of the Uniformed Services
CMAC	CHAMPUS Maximum Allowable Charge
CMIS	CHAMPUS Medical Information System
CPI	Consumer Price Index
CRI	CHAMPUS Reform Initiative
DEERS	Defense Enrollment Eligibility Reporting System
DHHS	Department of Health and Human Services
DHP	Defense Health Program
DME	Direct Medical Education
DoD	Department of Defense
DRG	Diagnosis Related Group
ER	Emergency Room
FEHBP	Federal Employees Health Benefits Program
FI	Fiscal Intermediary
FPO	Fleet Post Office
FTE	Full-Time Equivalent
FY	Fiscal Year
FYDP	Future Years Defense Program
HCF	Health Care Finder
HCFA	Health Care Financing Administration
HMO	Health Maintenance Organization

HS	High School
IDA	Institute for Defense Analyses
IM/IT	Information management/information technology
MCS	Managed Care Support
MEPRS	Medical Expense and Performance Reporting System
MHS	Military Health System
MilCon	Military Construction
MMSO	Military Medical Support Office
MSA	Metropolitan Statistical Area
MTF	Military Treatment Facility
NAIC	National Association of Insurance Commissioners
NMOP	National Mail Order Pharmacy
O&M	Operations and Maintenance
OASD(HA)	Office of the Assistant Secretary of Defense (Health Affairs)
OCHAMPUS	Office of the Civilian Health and Medical Program of the Uniformed Services
OHI	Other Health Insurance
OPE	Out-of-Pocket Expenses
PCM	Primary Care Manager
PDTS	Pharmacy Data Transaction Service
POS	Point of Service
PPI	Producer Price Index
RWP	Relative Weighted Product
SA	Space-Available
SADR	Standard Ambulatory Data Record
SIDR	Standard Inpatient Data Record
TDP	TRICARE Dental Program
TMA	TRICARE Management Activity
TPR	TRICARE Prime Remote
TSP	TRICARE Senior Prime
UM	Utilization Management
USUHS	Uniformed Services University of the Health Sciences